

OXENDINE, SYMPHONY D., Ph.D. Examining the Impact of Institutional Integration and Cultural Integrity on Sense of Belonging to Predict Intention to Persist for Native American Students at Non-Native Colleges and Universities. (2015)  
Directed by Dr. Deborah J. Taub. 174 pp.

Higher education scholars have examined various factors affecting student retention, yet few scholars have focused on Native American student persistence. The purpose of this study is to examine the contributions of institutional integration and cultural integrity to Native American college students' sense of belonging within the campus community and their intention to persist. This quantitative multi-institutional research design used Tinto's (1987; 1993) theory of student departure and Hurtado and Carter's (1997) sense of belonging model as guiding frameworks to explore the issue of sense of belonging and intention to persist. The researcher utilized the North American Indigenous College Student Inventory (Marroquin & McCoach, 2014) to measure cultural integrity and the Institutional Integration Scale-Revised (French & Oakes, 2004) to measure institutional integration. Results of the regression analyses showed that institutional integration and cultural integrity contributed significantly to Native American students' sense of belonging. Furthermore, sense of belonging predicts, although not to a large extent, intention to persist for Native American college students. This study revealed that social support and peer-group interaction are the most significant factors contributing to sense of belonging for Native American college students. In addition, staff support and lack of social isolation were also significant contributors to sense of belonging. This study expands the body of knowledge regarding the Native American college student experience, specifically helping shed light on factors

contributing to their success. In addition, the results of this study can be used to help influence culturally relevant policies and practices for institutions and higher education professionals providing services for Native American college students.

EXAMINING THE IMPACT OF INSTITUTIONAL INTEGRATION AND  
CULTURAL INTEGRITY ON SENSE OF BELONGING TO PREDICT  
INTENTION TO PERSIST FOR NATIVE AMERICAN STUDENTS  
AT NON-NATIVE COLLEGES AND UNIVERSITIES

by

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A Dissertation Submitted to  
the Faculty of The Graduate School at  
The University of North Carolina at Greensboro  
in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

Greensboro  
2015

Approved by

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Committee Chair

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To my mother, Dr. Denise K. Henning, my first teacher, my forever-best friend, role model, and anchor that keeps me grounded.

To my grandmother and grandfather, Bill and Betty Smith, for being the best grandparents in my world and raising the best mother a girl could ask for.

## APPROVAL PAGE

This dissertation, written by Symphony D. Oxendine, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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## ACKNOWLEDGMENTS

This dissertation is the culmination of a journey that was laid by my ancestors before me and I am grateful for all the support I have received. It is my hope that this research will be just a beginning for me and is my humble contribution to easing the way for those who follow. The revelation at the end of this journey has helped me to redefine my professional philosophy as “Students are a solution to be embraced, not a problem to be fixed.”

I want to thank my husband, Derek Oxendine, for being my other half. Not many people get to experience a simultaneous doctoral journey with their partner so I count myself one of the lucky few. It is because of your support, encouragement, and sometimes exasperation that I was able to get through the doctoral program and especially through statistics. The sacrifice has been greatest for my daughters, Sonata and Aria, but my hope is to make this world a better place for you because I love both of you and I want your lights to shine bright. Mom and John—no matter what, you have been there. I don’t know that there is much more I can say besides thank you for being the model of a healthy marriage and wonderful parents.

The commitment to pursuing this degree would not have happened without the trust and dependability I have for our family and friends in Robeson County and beyond. Ginger Dayle Hunt, Donna Oxendine, Alexis Oxendine, Johnathan Oxendine, Virginia Foster “Aunt Keit,” Leann Melvin, Christie Poteet, Frankie and Steve Taylor, and all of

the other relations that have helped with this journey, after all, “It takes teamwork to make the dream work.”

To my family in Oklahoma, Howard—my dad, and Terry McDaniel, Harmony McDaniel, Melodie Hamilton, Uncles and Aunts, Nieces and Nephews, thank you for helping to shape me into who I am today. I must thank Tiffany Fietze and Kathalena Avendaño, the other two of an awesome trio, for being true sisters of my soul, sticking by me throughout the years, and giving me friendship that is unparalleled.

The influence of Alpha Pi Omega Sorority, Inc. in the beginning of my journey at Oklahoma State University, the student affairs professionals who supported me, and the sisters of Alpha Pi Omega are the reason I kept pushing to finish my undergraduate and not stopping there but continuing on to this level. It is because of my experience at Oklahoma State University and within Alpha Pi Omega that I have sought out higher education as my life’s work.

I would like to express my sincere gratitude to all of my colleagues and friends throughout my career that have had an impact and supported my development, Jen Day Shaw, Sara Jahansouz, Irlanda Gonzalez Price, Jason Robertson, and countless other individuals that would take me days to list. To my fellow UNCG doctoral students past and present, Wendy Powers, Torry Reynolds, Liz Jodoin, and Traci Bellas, thank you for your support, feedback, encouragement, friendship, and venting sessions.

The opportunity to be involved as a member of ACPA Native American Network (NAN) and NASPA-Indigenous Peoples Knowledge Community (IPKC) and the colleagues in these two wonderful organizations, it is because of all of you that I dreamed



I could be a scholar. The chance you all gave me to share my story and then write about it sparked the flame for research and scholarship. I will be forever grateful.

Lastly, I would like to thank my committee, Drs. Deborah Taub, Brad Johnson, Beverly Faircloth, and Stephanie Waterman. Each of you have given me copious amounts of both challenge and support in the way I needed it to be a better student and scholar. Your guidance and inspiration throughout this process has been phenomenal and I hope to keep making each of you proud throughout my career.

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## **CHAPTER I**

### **INTRODUCTION**

Given the impact that education has not only on an individual but also their family and community, “few choices have more far-reaching implications than the decision about college” (Astin, 1993, p. 1). The decision to attend and complete college has an enormous impact on an individual through an improved quality of life (e.g., increased earning capacity, improved quality of life, higher life expectancies, etc.; Baum, Ma, & Payea, 2013). A recent report by the College Board underscores the impact that higher education has on an individual, citing that “the evidence is compelling that postsecondary education not only provides valued credentials but also increases skills and knowledge and changes the way people approach their lives” (Baum et al., 2013, p. 10). Furthermore, in addition to how individuals experience positive impacts from higher education attainment (Pascarella & Terenzini, 2005), society as a whole is impacted as well:

Beyond the economic return to individuals and to society as a whole, higher education improves quality of life in a variety of ways, only some of which can be easily quantified. High levels of labor force participation, employment, and earnings increase the material well-being of individuals and the wealth of society, and also carry psychological benefits. Adults with higher levels of education are more likely to engage in organized volunteer work, to understand political issues, and to vote. They are also more likely to live healthy lifestyles. The issue is not just that they earn more and have better access to health care; college-educated adults smoke less, exercise more, and have lower obesity rates. These differences not only affect the lifestyles and life expectancies of individuals but also reduce medical costs for society as a whole. (Baum et al., 2013, p. 10)



As evidenced not only in economic benefits, but also quality of life and societal benefits, it behooves higher education to provide an environment that enhances student success. The reasons why students do not persist have been focused on in research within higher education, yet the problem continues and there is recognition that no universal solution exists (Bean & Eaton, 2000; Berger & Milem, 1999; Braxton, Milem, & Sullivan, 2000; Davidson, Beck, & Milligan, 2009; Hausmann, Schofield, & Woods, 2007; Hausmann, Ye, Schofield, & Woods, 2009; Hurtado, Milem, & Clayton-Pedersen, 1999; Kuh, Kinzie, Schuh, & Whitt, 2005; Peltier, Laden, & Matranga, 1999; Tinto, 1975, 1987, 1993, 1997, 2006). However, research about persistence for Native American students has arisen out of the cultural deprivation theory, asserting that Native American students' attachment to their culture was a barrier for their success in attaining higher education (Huffman, 2010).

It is important that attention be focused on situating persistence research with practical applications in bringing into perspective culturally relevant solutions to address the lack of persistence. However, theoretical student retention models focus largely on White students, as the body of research was developed by and for the dominant culture (Tierney, 1992b). Subsequently, the field of knowledge must be expanded to include awareness of the challenges various student populations face in order to create solutions.

Empirical research regarding Native American student persistence has increased (Akee & Yazzie-Mintz, 2011; Brayboy & Castagno, 2011; Guillory, 2009; Tierney, 1992b; Waterman, 2004), yet there is still considerable evidence of consistently poor Native American student completion. It is crucial that Native American students

experience a positive and supportive collegiate experience that provides the necessary support for degree attainment once they enroll (Huffman, 2001; Jones, Castellanos, & Cole, 2002; Lundberg, 2007). This is especially true for Native American students and their communities, given that the identity for Native American people is complex, as Native American identity is derived from one's connection to a community or place and Native Americans are taught to value the community over individualism (Alfred, 1999; Huffman, 2010).

This introduction is structured to provide a broad overview of the proposed study. To begin this chapter, sense of belonging will be defined and the need for belonging within the collegiate experience as it contributes to positive outcomes for students. In addition, the researcher will explicate the need for sense of belonging to be empirically studied separate from social integration.

Next, the statement of the problem will be identified. This section will demonstrate that even though minority enrollment in higher education continues to increase, Native American students—the target population of this study—remain the least likely student population to graduate from postsecondary institutions (DeVoe & Darling-Churchill, 2008). Furthermore, there is a gap in the research to assist higher education institutions and professionals in how best to support Native American student success.

Following the statement of the problem, the theoretical and conceptual frameworks that ground this study will be presented. Tinto's Interactional Theory (1975, 1987, 1993) will be presented and its use will be situated within the context of this study. In addition, the researcher will present a conceptual framework that has been developed

to understand the individual constructs that are guiding the research questions for this study. Finally, the significance of the study and guiding research questions will be presented. This chapter will conclude with definitions of the terminology that will be utilized throughout this study.

### **Sense of Belonging**

Abraham Maslow's (1943) seminal research on human needs and theories of human personality laid the foundation for what is now known as "Maslow's Hierarchy of Needs" (Block, 2011). Maslow states that "belongingness" is essential to one's individual growth as a person and existence within a community. The definition of sense of belonging is represented as "an individual's sense of identification or positioning in relation to a group, which frequently results in an affective response" (Tovar, Simon, & Lee, 2009, p. 201). In the context of higher education, Strayhorn (2012) defines students' sense of belonging as

perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g. campus community) or others on campus (e.g. faculty, peers). It's a cognitive evaluation that typically leads to an affective response or behavior. (p. 3)

Strayhorn (2012) further elaborates that there are many characteristics that can be included in defining sense of belonging within higher education but the core within them is that sense of belonging is relational.

Specifically, in the context of higher education, there is an increasing body of research that focuses on sense of belonging as it relates to and as a factor of student

success and retention. Much of the research on sense of belonging within higher education characterizes it as one of the most important factors in the retention of students, especially for students of color (Hurtado & Carter, 1997; Hurtado et al., 1999; Maestas, Vaquera, & Zehr, 2007; Maramba & Museus, 2011). Higher education scholars have examined various factors affecting student retention, including sense of belonging, yet few scholars have focused on Native American student persistence (Guillory, 2009; Guillory & Wolverton, 2008).

### **Sense of Belonging as Separate from Integration**

The evolution of sense of belonging within higher education research began with identifying sense of belonging as a latent factor within social integration and was used interchangeably with that of social integration or “fit” within the institution (Hurtado & Carter, 1997; Tinto, 1975, 1987, 1993). The first study to utilize sense of belonging as an empirically separate construct from integration was Hurtado and Carter (1997). The authors viewed the complex and changing environment within higher education, including the many intersections of identity and membership within communities available in a campus community, as a necessity to distinguish integration from the concept of “students’ affiliation and identity with their colleges” membership or belonging (p. 238). Further clarifying the distinction of sense of belonging as a separate construct, Strayhorn (2008a) stated,

... sense of belonging consists of both cognitive and affective elements (Hurtado & Carter, 1997). An individual assesses his/her position or role in relation to the group (cognitive) which, in turn, results in a response, behavior, or outcome (affective). Sense of belonging, then, reflects the extent to which students feel connected, a part of, or stuck to a campus (Jacoby & Garland, 2004–05;

Rosenberg & McCullough, 1981). It is a subjective evaluation of the quality of relationships with others on campus. For example, some scholars measure sense of belonging as how much others would miss you if you went away (Rosenberg & McCullough). (p. 505)

Hurtado and Carter's (1997) seminal study on sense of belonging for Latino college students was the first study to empirically examine sense of belonging as a separate construct. Later studies followed suit with recognizing sense of belonging as a separate construct and sense of belonging emerged within the literature as an important component contributing to student persistence and retention (Berger & Milem, 1999; Braxton et al., 2000; Hurtado & Carter, 1997; Strayhorn, 2008b; Zea, Reisen, Beil, & Caplan, 1997).

### **Statement of the Problem**

As researchers within the academy predicted (Pelavin & Kane, 1990), U.S. postsecondary institutions have experienced the effects of the growing population of minorities since the early 1990s. This influx of minority students has naturally included the Native American population, which has long been the minority of the minorities (Brayboy & Castagno, 2011). In 2011–2012, Native Americans accounted for approximately 0.9% of the total post-secondary student enrollment (Ginder & Kelly-Reid, 2013). Native American postsecondary enrollment increased from 76,100 or 0.7% in 1976 to 181,100 or 1% in 2006, which nearly doubled the number of Native Americans in higher education (DeVoe & Darling-Churchill, 2008). In the 2012–2013 academic year, only 0.6% of degrees granted were to Native American students (Ginder & Kelly-Reid, 2013).

Despite making tremendous educational gains, Native American students continue to have the lowest graduation rates of all racial/ethnic groups, a gap that has remained steady over the past three decades (E. F. Brown, Donlan, & Lee, 2010). These data suggest that a majority of Native American students who begin college do not persist to graduation. There is scant research to help us understand Native American students' experiences within higher education and institutions seem ill-prepared to meet the needs of Native American students (Tierney, 1992b).

Student experiences within higher education institutions have a major impact on the decision to persist (Astin, 1975, 1993, 1997; Bean & Eaton, 2000; Tinto, 1975, 1987, 1993). Given the challenges Native American students face within higher education, understanding what contributes to their persistence remains critical in order for the academy to address the issues. This study seeks to examine the factors that contribute to Native American students' sense of belonging and intention to persist, and to explore what, if any, role cultural integrity plays.

### **Theoretical Framework**

Student persistence and departure has been a well-studied phenomenon within higher education (Astin, Tsui, & Avalos, 1996). Tinto's (1987, 1993) Interactionalist Theory will be used as the theoretical framework guiding this study. In this model, a student's departure from the institution is directly related to his/her integration within institutional environment. Tinto posited that students must sever ties with their pre-college life in order to successfully integrate into higher education, thus enabling them to focus on collegiate pursuits and do what it takes to persist (Tinto, 1987). Alluding to the

construct of assimilation, Huffman (2010) acknowledges that Tinto's theory "implies that American Indians, along with other minority students, need to weaken, if not sever, the ties with their families and communities" (p. 148).

Central to Tinto's (1993) theoretical framework is "a model of educational communities that highlights the critical importance of student engagement and involvement in the learning communities of the college" (p. 132). Tinto (1993) hypothesized that a student's integration within the academic and social environment occurred in specific ways and directly impacted their decision to persist. Academic integration was characterized by meeting academic standards of the institution and reflects how the student develops intellectually in his/her academic endeavors. Social integration is characterized by how connected the student is to the social systems on campus, including formal (e.g., student organizations or extracurricular activities) and informal (e.g., peer groups) settings. Tinto (1993) suggested that student academic and social integration have a direct impact on their commitment to the institution and ultimately their degree attainment.

Tinto's (1993) model has been criticized for utilizing integration in a way that is not entirely applicable to diverse populations (Attinasi, 1992; Braxton et al., 2000; Hurtado & Carter, 1997; Tierney, 1992a). Thus, this model will be used critically in order to explore what aspects of social and academic integration contribute to sense of belonging and the importance of cultural identity for Native American students. Currently, there is no literature describing how the social and academic environments of the college experience affect the sense of belonging of Native American students.

### Conceptual Framework

The conceptual framework utilizes Tinto's (1993) constructs of academic and social integration to understand how these constructs influence Native American students' sense of belonging which in turn influences their intent to persist. In addition, the effect of cultural identity within the constructs of the framework will be explored (Figure 1).

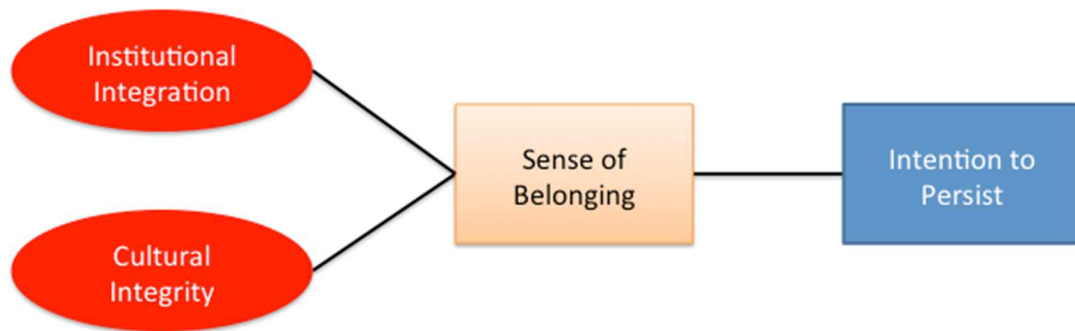


Figure 1. Conceptual Framework.

The outcome of Tinto's (1993) model of student integration is commitment to the institution, which ultimately influences degree attainment. In this study, current students' self-reported intention to persist will be ascertained rather than actual graduation. Self-reported intention to persist has been shown to be a good predictor of actual behavior in many research studies (Bean & Eaton, 2000; Cabrera, Castaneda, Nora, & Hengstler, 1992; Fishbein & Ajzen, 1975).

### Purpose of the Study

The purpose of this study is to explore the effects of institutional integration and cultural integrity for Native American students' sense of belonging and analyze if sense



of belonging predicts intention to persist. It is the hope of this researcher that the results of this study will expand the body of knowledge regarding the Native American student experience, determine the most significant factors that contribute to developing Native American students' sense of belonging, and understand if sense of belonging can predict Native American students' intention to persist.

### **Significance of the Study**

As there is no known research on the factors affecting sense of belonging for Native American students within higher education, this study intends to contribute knowledge to help institutions embark on educational reform through culturally relevant programs and practices that will meet the needs of Native American students. Furthermore, the results of this study can be used to help influence policies and practices for institutions and higher education professionals providing services for Native American students. In addition, the researcher hopes to provide information for the construction of a student development theory specifically addressing Native American student populations.

### **Definition of Terms**

The definitions of key terms utilized in this study are provided to assist in uniformity and common understanding. Throughout this study the following terminology will be utilized:

*Academic Integration*—Academic Integration is defined within two contexts: formal integration relates to the formal experiences of students (i.e., classroom, faculty/staff interactions regarding course/classroom experience) and informal academic

integration (i.e., faculty/staff interactions outside the classroom/course content, career readiness opportunities; Tinto, 1975).

*Cultural Integrity*—Cultural integrity is defined in this study as the ability to maintain a strong cultural identity through engaging one's culture as an anchor. More specifically, Deyhle (1995a), Deyhle (1995b), and Deyhle and Swisher (1997) describe that cultural integrity calls on students' racial and ethnic backgrounds as ways to enhance learning.

*Historically Native American Fraternities and Sororities*—Refers to fraternal organizations that were founded based on the customs, beliefs, and traditions of Native American culture and that serve the Native American community (Jahansouz & Oxendine, 2008).

*Institutional Integration*—Refers to the interactions of students with both the social and academic environments of an institution, including commitment to the institution and students' goals for graduation within the institutional environment (Pascarella & Terenzini, 1980).

*Native American/Alaska Native/American Indian/Native/Indigenous*—These terms will refer to the Indigenous population of the Americas. The terms Native American will be used throughout this study for consistency unless otherwise quoted directly from literature. Horse (2005) noted that the terminology used to refer to the Indigenous population has evolved throughout time:

... yet there is no standard descriptor, or nomenclature, for identifying those who call themselves American Indian or Native American. The terms are used interchangeably and seem to be based on preference. Those born before 1950

tend to be comfortable with being called American Indian. Those born later in the twentieth century seem accustomed to the term Native American. Readers should note that Native American now includes the indigenous people of Alaska, Hawaii and American Samoa. (p. 66)

Often the terms American Indian/Alaskan Native/Native American are used as a strictly racial categorization and, because they are most often from self-identified respondents, they do not denote membership in a tribal nation or affiliation within a tribe or nation (DeVoe & Darling-Churchill, 2008; Shotton, Lowe, & Waterman, 2013).

*Non-Native Colleges and Universities (NNCUs)*— NNCUs is used in this study to refer to institutions that are not Tribal Colleges and Universities (TCUs; Shotton et al., 2013). This term was developed because it centers Native Americans, whereas “Predominantly White Institution” centers Whiteness (Waterman, personal communication, January 7, 2015). This term was chosen specifically because institutions with Native American students that are not TCUs may have many designations such as Predominately White Institutions (PWIs), Minority Serving Institutions, Native American Serving Institutions, and Hispanic Serving Institutions (HSIs) yet Native students still comprise a significantly small percentage of the student body.

*Persistence*—This study uses persistence to refer to the “rate at which students who begin higher education at a given point in time continue in higher education and eventually complete their degree, regardless of where they do so” (Tinto, 2012, p. 127).

*Retention*—Retention is defined in this study as the constant enrollment from one semester to the next within an institution. This study reviews literature that uses retention and persistence interchangeably. However, persistence, as the dependent variable used in

the current study, is defined and reflects that a student may persist to graduation yet not be retained at their current institution.

*Sense of Belonging*—Sense of belonging is defined in this study as:

students' perceived social support on campus, a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g. campus community) or others on campus (e.g., faculty, peers). It's a cognitive evaluation that typically leads to an affective response or behavior. (Strayhorn, 2012, p. 3)

*Social Integration*—Social integration refers to the level and the degree of congruency between the individual and his or her social environment (e.g., extracurricular activities and peer-group interactions). It focuses on the students' affiliations with peers, faculty, and staff that occur largely outside the academic realm of the institution (Tinto, 1975).

*Tribal Colleges and Universities (TCUs)*—TCU represents institutions that are chartered and governed by tribal governments and have tribal identity, values, and reciprocity at their core (Benham & Stein, 2003; Shotton et al., 2013).

### **Research Questions**

The following research questions about Native American students' sense of belonging guided this study:

1. To what extent does institutional integration predict sense of belonging for Native American students?
  - a. Of the items examined, what is the most significant predictor of sense of belonging?

2. To what extent does cultural integrity predict sense of belonging for Native American college students?
  - a. Of the items examined, what is the most significant predictor of sense of belonging?
3. Does having a higher sense of belonging predict intention to persist for Native American students?

### **Researcher Stance**

Before proceeding further in this introduction, it is important that I disclose the position that I have as the researcher within this study. Even though this is a quantitative study, and as such does not typically include a section on the positionality of the researcher, it is important to share with you, the reader, that my identity and the research topic are inextricably linked. Peshkin (1988) points out that “researchers notwithstanding their use of quantitative or qualitative methods, their research problem, or their reputation for personal integrity should systematically identify their subjectivity throughout the course of their research” (p. 17).

Throughout my childhood, I have been brought up with values taught to me as they were passed through many generations of my family. My great-great grandfather was born in the Cherokee Nation of Indian Territory, which was the designation of Oklahoma prior to statehood. My great-great grandfather, great-grandfather, and grandfather grew up in the Cookson Hills around Roland, Muldrow, and Sallisaw, OK, where my family settled following the 1839 Forced Removal (Trail of Tears). In spite of pressures to assimilate, my family continued to maintain many traditional aspects of our

tribe, such as sharing, generosity, community wellbeing, humility, and respect for wisdom and elders. I have learned, continue to learn, and follow the traditions of my tribe to the best of my abilities. I respect the customs of my tribe as they were passed to me: I respect my elders, I participate in ceremonies and events that serve to reinforce my tribal beliefs, and in every decision I make I take into account how my decisions will better my family and my tribal community. I was taught at a very early age to respect my traditions and to always give back to the community from which I came. Even though I moved around while my mother pursued her education, I have always traveled back to my tribal community in Tulsa, Oklahoma, to participate in ceremonies and other events. In the different areas that I have lived, I participated in Native American programs and helped to bring Native people together in different areas through these programs.

As a Cherokee/Mississippi Choctaw, mixed-race, woman from Oklahoma, my experiences within the collegiate environment were crucial components in my undergraduate education. It is because of those experiences, and the need to understand “how” and “why” I could be fully integrated both socially and academically in my undergraduate institution, yet still not feel a complete sense of belonging, that I committed to pursuing this area of research. During my undergraduate experience I consistently felt compelled to change who I was to fit into the academic environment. My experiences within the organizational culture in education continued to reinforce a nagging feeling that I was wrong and that my identity was a deficit. The need to give back, a concept within the academy referred to as reciprocity, was inherent in me for as

long as I can remember, as I was raised to value my connection to my community. Dana-Sacco (2010) elaborates this need for reciprocity for Indigenous scholars:

We Indigenous scholars can exercise more proactive leadership by practicing critical introspection and building strength and capacity from within our communities. By critical introspection I mean a regular, rigorous, reflective self-evaluation process in which we consider our Indigenous research and scholarship practice in the context of our accountability to the collective...It's not enough to ask only how we can be supportive of tribal communities; we must also practice personal accountability to our communities. We bring ourselves into the work with all our strengths, limitations, and complexities. Recognizing personal accountability to the larger collective is a humbling experience that helps us to understand not just who we are in the community but the legacy of our families and all the sacrifices large and small that have been made on our behalf. (p. 61)

Thus, this process of exploring what scholarship means to me and in my journey of becoming a scholar I have consistently been compelled to understand the factors and forces that promote or inhibit success of Native students within higher education.

Further, as my identity is unique to me, I respect that the multitude of identities of others is inherent in the participants that will be part of this study. As such, I will simultaneously generalize knowing that the majority of readers already generalize Native people while at the same time provide caution that you cannot lump every Native into the same group.

As contradictory as this is, the majority of student development theory is grounded in generalizations that were cultivated from samples of homogenous population of largely White, middle-class male students attending PWIs and were generally written by White males (Sanford, 1962; Chickering, 1969; Pascarella & Terenzini, 1991; Perry, 1968). With that in mind I partake in this research to begin to explore pieces of the

experiences of Native American students within Non-Native Colleges and Universities. Furthermore, during my graduate education and the beginning years of my professional career, my experiences with the theoretical foundations and prevailing philosophies that I was taught to utilize in working with students operated from a deficit model. These theories treated the students as wrong and the institutions as right, thus putting the pressure to assimilate on the students in order to be successful (Rendón, Jalomo, & Nora, 2000). Furthermore, I have experienced contempt from many non-Native American scholars/practitioners in regards to being a Native woman doing research on Native populations. This has created a voice in my head that questions whether it is okay to study a group of which I am a part. This is not okay, as much of the previous research in student development has been done by scholar/practitioners who themselves are members of the communities they research. It is my hope that this research will begin to combat the deficit model and create a new course for asset-based strategies to help students succeed. This is in order to provide tools for others to begin to comprehend, within their own context, what would work well for students. Also, the need for beginning to create theory that is grounded in the experiences of Native students is necessary.

In conclusion, where to some it may seem as though this research topic is too personal for me to be able to conduct this study and truly uncover what comes from the data, be it in contradiction or congruence to my experience, to this I can state that the critical importance of understanding how the experiences within the collegiate environment impact persistence for Indigenous students (e.g., American Indian/Alaskan Native/Native American, etc.) will not negate my experience; rather, it will validate that



there is a need for better understanding of how to make the educational experience a better one. It is my intent that this study will lead to further research and ultimately into creating theory reflective of and grounded in the experiences of Native American students. My goal is to set the stage for research by Native American scholar/practitioners in contributing to the creation of culturally relevant theory and practices for Native American students helping to remove the stigma surrounding research within our own communities.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

This chapter will present an overview of the literature pertaining to sense of belonging, post-secondary retention/persistence models, and a historical review of the education of Native Americans in the U.S. Because there is no empirical research of Native American students' sense of belonging, each section of this literature review will explore and incorporate relevant literature of each element that contributes to the major concepts of this study. This literature review will demonstrate first, the need for further research of the Native American higher education experience, through the review of a brief history of educational experiences for Native Americans, as well as current relevant literature contributing to the experiences of Native Americans within higher education. Second, cultural integrity will be examined as a factor in Native American students' ability to maintain their cultural identity and utilizing it as an asset within their postsecondary experience. Third, sense of belonging will be identified and contextualized as a critical component in the collegiate experience, especially in relation to students of color. Finally, the constructs of social and academic integration, identified through the interactions with Faculty, Students, and Institution, as factors of academic persistence in Tinto's (1975, 1987, 1993) Interactionalist Theory will be examined.

### **History of Native Americans and Alaska Natives in Higher Education**

Non-Native scholars have authored the majority of literature about Native Americans and, until recently, there has been little research about the Native American experience in higher education. Tierney (1992b) wrote,

American Indians are one of the smallest ethnic minorities of the United States population, and American Indian students are among the most underrepresented groups in academe. In part, because of both of these factors there is little research about American Indian undergraduate experiences in higher education. (p. 1).

The history of Native American higher education within the United States can be condensed down to three eras: colonial, federal, and self-determination (Tippeconnic Fox, Lowe, & McClellan, 2005). The colonial era began with contact between the Europeans and the Native Americans. Within this time period, the first nine colleges were formed but only three included in their founding missions to educate the Native Americans. Additionally, less than 50 Native Americans enrolled in the first 80 years of American higher education and only four graduated. Reasons for this lack of inclusion range from the unwelcoming environment for the Native Americans and the Native Americans beliefs that colonial education would take away from their tribal education and traditional skills. This era continued until the end of the Revolutionary war (Tippeconnic Fox et al., 2005).

The federal era originated from the relationships established through the treaties between the government and the tribes following the Revolutionary War. Close to one hundred treaties were signed and “the United States government created a trustee responsibility for American Indian education as a matter of these treaty obligations and

subsequent legislation” (Tippeconnic Fox et al., 2005, p. 9). This era is most notable for its lack of effort to increase participation of Native American/Alaska Native people in higher education. The same objectives from the previous era included educating Native Americans for assimilation and Christianization (Tippeconnic Fox et al., 2005).

The self-determination era of Native American higher education began with the Indian Reorganization Act (IRA) of 1934, which affirmed tribal sovereignty and self-determination in regards to the tribal land holdings, education, self-governance, and economic stability. The IRA also created the first federally funded college scholarship for Native Americans. It is important to note that during this timeframe the federal government sought to terminate its trust relationship with Native Americans, relocate Native Americans from reservations by incentive (in contrast with earlier federal efforts to use force to move Native American people on reservations), and “shift responsibility for American Indian services to the states” (Tippeconnic Fox et al., 2005, p. 10). Also during this time, many tribal nations that had previously been federally recognized had their recognition stripped. Prior to self-determination, there were only two colleges focused on the education of American Indians, one being the Croatan Normal School (now known as the University of North Carolina at Pembroke) funded by the state of North Carolina (Tippeconnic Fox et al., 2005). It is interesting to point out that the Lumbee tribe lost their federal recognition during the self-determination era, yet their school continued to be only Native American serving until the 1960s.

### **Current Research on American Indian Retention**

Research addressing the retention of Native American college students is limited. Much of what does exist is not longitudinal and was conducted at only one or just a few institutions (Garland, 2010). The majority of this research has been done from a qualitative perspective. Garland (2010) describes why statistical data is difficult for the Native American college student population:

A specific complicating factor related to understanding the American Indian college student experience through research occurs when American Indian data are collected, at the institutional or national levels, and then reported alongside other racial and ethnic groupings. Among racial/ethnic data groupings, American Indian data often become statistically powerless and therefore unreliable in comparison. Subsequently, American Indian data are generally not reported or discussed within quantitative research findings. (p. 1)

Some of the factors contributing to Native American student retention are: appropriate application of theories of retention, individual characteristics, cultural identity, role of perceived racism and stress, institutional environment, role of finances, and inclusion of family/kinship relationships (Guillory & Wolverton, 2008; Larimore & McClellan, 2005; Peltier et al., 1999). There is a clear need for institutions to be open and committed to collaboration between Native students, family, and tribes; and this research proposes to increase our understanding of Native American students in order to better meet their needs within higher education.

Another important aspect of Native American student retention is the complexity of both Native American identity as well as that of the higher education system. A common metaphor that has been used to refer to the struggle of the Native American

student experience within the academy has been that of “walking in two worlds” (Henze & Vanett, 1993; Juntunen et al., 2001). However, typically, the traditional culture of Native American students does not endorse the same values and concepts that the non-Native world does (Tierney, 1992a). Therefore, it is important for Native students to maintain their traditional values as a way to stay grounded in their cultural identity. Maintenance of identity has been cited as one of, if not the most, influential factors in student success (Deyhle, 1995b; Huffman, 2001; Tierney, 1992b; Waterman, 2004). In other words, those students who were comfortable with their cultural identity were able to better navigate their way through the academic world (Benjamin, Chambers, & Reiterman, 1993; Larimore & McClellan, 2005). The significance of this factor for Native American students is best described by Benjamin et al. (1993):

It seems rare, given cultural, world-view, and cognitive obstacles, that any American Indians—especially those who strive to maintain their cultural identity—can succeed in a higher education system dominated by the powerful and persuasive influences of the White majority culture. And yet, they do. (p. 25)

A concurrent theme in all of the literature in regards to Native American student participation and retention is a need for institutions to gain a better understanding of the cultural, social, and political make-up of this diverse group of people (E. F. Brown et al., 2010; Seidman, 2005; Tierney, 1992b). It is important, as well, to understand that not only do Native American people have a cultural identity component but also a legal and political status that sets them apart from others, especially given the climate of tribal federal recognition fights taking place within the legislature and within Indian country

(Brayboy, 2006; Horse, 2005). This uniqueness can affect Native American students' identity and ultimately their success in higher education.

### **Cultural Integrity**

A factor that has been identified to have one of the most significant effects on poor academic achievement for Native American students has been cultural conflict (Huffman, 2001). Cultural conflict is most often exemplified in the cultural distance between the students' values, worldview, and behavior compared to those of the institutions. As Tinto's Interactionist Theory (1993) postulates, this incongruence causes a lack of integration within the institution that ultimately can result in student attrition.

Research on the cultural identity of Native American students has shown that they are more successful when their cultural identity is strong and is utilized as an asset rather than seen as a deficit within the institutional environment (Horse, 2005; Huffman, 1999, 2001, 2011; Okagaki, Helling, & Bingham, 2009; White Shield, 2004, 2009). In other words, students who have a higher cultural integrity have a better chance at academic success.

As cultural integrity is grounded within the framework of Transculturation Theory, it is important to provide a summative context of Transculturation Theory. The concept of cultural integrity is grounded in Huffman's Transculturation Theory (Huffman, 1991, 1997, 1999, 2001, 2003, 2008, 2010, 2011; Huffman & Ferguson, 2007) that arose from his research on Native American college students. Within his research, Huffman identified that a key component for most, if not all, of the students throughout

his studies was a strong cultural identity and the ability to resist assimilating in order to be successful (Huffman, 1991, 1997, 1999, 2001, 2003, 2008, 2010, 2011; Huffman & Ferguson, 2007). In her study on Navajo students within secondary schools, Deyhle (1995) posited a definition of cultural integrity within the educational environment for Native American students that “schools should do everything in their power to use, affirm, and maintain these [Native culture and language] if they truly want to achieve equity and promote Navajo students’ academic success” (p. 437). Huffman (2011) posits two assumptions in regards to the transculturation of Native American students. The first assumption is that a Native American students’ culture is an asset for persistence by utilizing their Native American identity as “an emotional and cultural anchor” (Huffman, 2011, p. 2). The second assumption is through maintenance of a strong cultural identity, Native American students’ capacity to engage in the institutional environment through cultural exchanges, by learning and understanding the institutional norms, values, and contexts, will be positively influenced, resulting in academic success (Huffman, 2011). In addition, though Huffman (2011) does not specifically state a third assumption, he alludes to transculturation as conceptually distinct in that it does not require students to suffer loss of their own cultural worldviews (often referred to as cultural suicide); rather, it allows for simultaneous functioning within distinctive cultural settings.

The concept of cultural integrity is important, though theoretically a new concept, given the historical context of education of Native Americans within the U.S. A review of the literature about the history of education for Native Americans reveals governmental policies of assimilation through both legislation and education



(Tippeconnic Fox et al., 2005). Thus, we can see that cultural integrity, or the ability to maintain strong cultural identity, while in higher education is counter to how Native American people have encountered their educational journey.

### **Sense of Belonging**

Arising out of psychological research, in an effort to understand the impact of connection and the need for social bonds, “sense of belonging” has been characterized as one of the most important social needs for individuals (Maslow, 1968). A host of definitions have been posited for sense of belonging. The meanings often vary depending on the context in which the author is engaged. Strayhorn (2012) identified at least six different definitions of sense of belonging. He provides a definition that encompasses themes that were common throughout the literature as “sense of belonging is framed as a basic human need and motivation, sufficient to influence behavior” (Strayhorn, 2012, p. 17). Tovar and Simon (2010) further defined sense of belonging within the collegiate context as “an individual’s sense of identification or positioning in relation to a group, which frequently results in an affective response” (p. 201).

### **Sense of Belonging as a Human Need**

It is common knowledge that there are basic physiological needs for human beings (e.g., food, water). In the mid-20th century a shift in the field of psychology started to focus on the psychosocial aspects (i.e., psychological and social/interpersonal) being viewed as relevant to existence as physiological needs. Much as we need water and sustenance, we also have advanced emotional needs that fulfill our drive for self-actualization (Maslow, 1943). Maslow (1962) stated, “It would not occur to anyone to

question the statement that we ‘need’ iodine or vitamin C. I remind you that the evidence that we ‘need’ love is of exactly the same type” (p. 21). The characteristics of psychologically healthy individuals who are motivated towards growth and development are people who have “sufficiently gratified their basic needs for safety, belongingness, love, respect and self-esteem so that they are motivated primarily toward trends of self-actualization . . .” (Maslow, 1962, p. 23).

Maslow (1962) went on to further state that having needs “for safety, belongingness, love and respect” (p. 25) are deficits and must be satisfied for a person’s growth and development towards self-actualization. These basic needs are environmentally dependent because they can only be satisfied through relationships with others.

### **Sense of Belonging in Higher Education**

The definition of sense of belonging within the collegiate experience is best represented as “an individual’s sense of identification or positioning in relation to a group, which frequently results in an affective response” (Tovar & Simon, 2010, p. 201). In other words, students gain a feeling of comfort and come to believe they “fit in” or have a place within the campus community. Strayhorn (2012) further elaborates on the common characteristics of defining sense of belonging within higher education as “they all deal with students’ psychological experiences and, importantly, their subjective evaluation of the level of integration within a particular context (e.g., school, college)” (p. 8).

Specifically, in the context of higher education, there is an increasing body of research that focuses on sense of belonging as it relates to student success and retention (Baumeister & Leary, 1995; Hoffman, Richmond, Morrow, & Salomone, 2002; Hurtado & Carter, 1997; Maestas et al., 2007; Ostrove & Long, 2007; Strayhorn, 2008b). This sense of belonging helps anchor college students during the inevitable obstacles and challenges they face, by increasing their feelings of “fit,” affirming their presence in the institution, and increasing their relationships with peers to provide support. In addition, much of the research shows that sense of belonging is a powerful predictor of retention and student success (Berger & Milem, 1999; Braxton et al., 2000; Strayhorn, 2008a, 2011; Zea et al., 1997). General sense of belonging has been further disaggregated and studied in specific contexts and within higher education subpopulations of commuter students (Briggs, 2011; Demcho, 2011; Jacoby & Garland, 2004), first-year students (Hausmann et al., 2007; Hoffman et al., 2002; Johnson et al., 2007; Morrow & Ackermann, 2012; Pittman & Richmond, 2008; Strayhorn, 2012; Villalpando & Solorzano, 2005), students of color (Hurtado & Carter, 1997; Hurtado, Carter, & Spuler, 1996; Maestas et al., 2007; Museus & Maramba, 2011; Strayhorn, 2008a, 2012), students with disabilities (Allen-Wallace, 2010; Corcoran, 2010), transfer students (Woodward, 2013), students at community colleges (Tovar, 2013), students in learning communities (Spanierman et al., 2013), students in various academic majors (Ancar, 2008; Strayhorn, 2012), and students from various socioeconomic statuses (Ostrove & Long, 2007).

### **Sense of Belonging and Student Populations**

Much of the research on sense of belonging within higher education characterizes it as one of the most important factors in the retention of students, especially for students of color (E. F. Brown et al., 2010; Hurtado & Carter, 1997; Hurtado et al., 1999; Maestas et al., 2007; Maramba & Museus, 2011). A significant portion of research on sense of belonging in relation to the collegiate experiences of students of color has been done on Latino students. Hurtado and Carter (1997) sought to clarify what they viewed as a major flaw of Tinto's work. They argued that Tinto's model lacked an understanding of and appreciation for the "racial and ethnic minority students' views of their participation in college as an important part of the process of engagement in the diverse learning communities of a college" (p. 324). The academic interactions outside of the classroom, such as peer tutoring and informal contact with faculty, were associated with a relatively higher sense of belonging for Latino students. These findings were supported by later studies of diverse students, reinforcing that interaction with faculty and peer support contributed to a higher sense of belonging (Freeman, Anderman, & Jensen, 2007; Hausmann et al., 2007; Maestas et al., 2007; Morrow & Ackermann, 2012; Strayhorn, 2008a). Maestas et al. (2007) further identified specific academic integration experiences that had a significantly positive impact on sense of belonging: participation in academic support programs, faculty interest in student's development, and having classes with peer interactions and discussion.

Hurtado and Carter (1997) examined the causal relationship between sense of belonging and pre-college characteristics, college selectivity, ease of transition, and

perception of campus racial climate of Latino students. The study used the National Survey of Hispanic Students (NSHS) that combined four different sources of data on pre-college characteristics of the sample. The student sample came from data of the fall 1990 cohort of NSHS participants that used a longitudinal design with a final sample size of 272. The findings indicated that Latino students who were members of student organizations or who held leadership positions in organizations had a higher sense of belonging; specifically, involvement in Latino fraternity and sororities, social-community groups, and religious groups were the most influential (Hurtado & Carter, 1997). Furthermore, students who discussed course content outside of the classroom had a higher sense of belonging (Hurtado & Carter, 1997).

In a similar study, Maestas et al. (2007) used data from the Diverse Democracy Project, titled *Preparing Students for a Diverse Democracy* (Hurtado, Engber, & Ponjuan, 2003), to study sense of belonging on Hispanic, other Minority, and White students. Maestas et al. (2007) used the independent variables of pre-college background characteristics, academic integration, social integration, and experiences and perceptions of diversity to identify the impact those have on sense of belonging. A significant positive impact on sense of belonging was attributed to the following: having the belief that one could pay for college expenses, engagement in academic support programs, faculty interest in student's development, joining a sorority or fraternity, holding campus leadership positions, living in campus housing, socializing with different racial/ethnic group members, being supportive of affirmative action goals, and demonstrating positive behaviors toward diversity issues (Maestas et al., 2007).

Other components of the college experience have been found to influence sense of belonging. Freeman et al. (2007) explored the academic experience of sense of belonging, specifically within the classroom setting, among first-semester first-year students enrolled in non-major introductory courses in biology, psychology, and English. Freeman et al. (2007) examined the students' sense of belonging as it related to their perception of belonging at the class level as well as the students' perceptions of their instructors' characteristics. They found that a student's perception of social acceptance was a positive and significant predictor of his/her sense of belonging. The study confirmed that a higher sense of belonging within a specific class led students to report higher academic motivation, but that ultimately, social acceptance was the most predictive of sense of belonging. The importance of social interaction with diverse peers was also found to have a positive influence on sense of belonging (Demcho, 2011; Hausmann et al., 2007; Locks, Hurtado, Bowman, & Oseguera, 2008; Rhee, 2008).

A key finding from Hurtado and Carter (1997) is that diverse students developed a strong sense of belonging with the institution when they held memberships in peer groups that maintained their "home" or cultural connections. The importance of maintaining community/familial ties and the ability to give back to home communities, especially for students of color, has been supported throughout much of the literature (Guillory & Wolverton, 2008; Maestas et al., 2007; Nora & Cabrera, 1996; Nuñez, 2009; Waterman, 2004, 2012). In a study on Filipino American college students, Museus and Maramba (2011) extended the concept of maintenance of cultural identity as a critical component of sense of belonging. Museus and Maramba (2011) utilized a structural

equation modeling approach to examine “the extent to which racial/ethnic minority students’ connections to their cultural heritages and pressure to commit cultural suicide influence their sense of belonging” (p. 240). This study is rare in that it is one of the few quantitative studies looking at cultural factors in relation to sense of belonging. The findings support those from previous studies that show a statistically significant relationship that maintenance of cultural heritage resulted in an easier transition to campus, which in turn, resulted in greater sense of belonging for Filipino students.

In a comparison study, Strayhorn (2008b) sought to understand whether sense of belonging for Latino students had a similar effect compared to White students. Using the 2004-2005 College Student Experiences Questionnaire (CSEQ), this study utilized multivariate analyses to compare responses from 589 Latino and White students at four-year institutions. The results of the study revealed that both academic and social experiences in college influenced Latino students’ sense of belonging at a significantly higher rate than the White students’ sense of belonging (Strayhorn, 2008b). White students’ pre-college experiences were most significant in predicting their sense of belonging (Strayhorn, 2008b).

### **Tinto’s Interactionalist Theory**

Tinto (1975) developed a theory of institutional departure. Tinto begins to explain his model of student departure by saying that students come into the collegiate environment with two rooted characteristics, intention and commitment, and the influence of these characteristics shape the perceptions of students’ university experience. The intentions for pursuing an education can be either intrinsic (e.g., self-actualization

and development-oriented) and/or extrinsic (e.g., career-oriented). Having goals to achieve their education, and the commitment to see those goals achieved, is a key component for the likelihood of success (Tinto, 1975). There are two different types of commitment that Tinto attributes to the persistence of students: institutional and goal (Tinto, 1975).

Institutional commitment is defined by a students' commitment to continue towards degree completion at the institution in which they are enrolled, whereas, goal commitment is the general commitment to achieving the end-result of degree attainment (Pascarella & Terenzini, 1980; Tinto, 1975). While these commitments affect a student's initial entrance into the collegiate environment and are susceptible to change over time, the impact of the interactions that occur as a result of the college experiences will moderate their effect (Tinto, 1975). Initially, for most students, the transition to the college environment is difficult, possibly even challenging enough to cause their early departure. However, these initial factors are only part of the departure process. All departure is not explained by an absence of commitment or a low intention to persist (Pascarella & Terenzini, 1980; Tinto, 1975).

Tinto's theory of student integration (1987) arose from a combination of Van Gennep's study of rites of passage within tribal society, Emile Durkheim's study of suicide, and built on the work of Spady (as cited in Tinto, 1993). Tinto (1993) explained that his use of Van Gennep was to give a structure of the "longitudinal process of student persistence in college, and by extension about the time-dependent process of student departure" (p. 94). The first stage of Tinto's model is separation; a student must separate



from their communities of the past in order to transform him or herself and adopt the culture of the college environment. In later iterations of his theory, Tinto (2006) placed less emphasis on separation as a requirement for student retention and even acknowledged that “. . . for some if not many students the ability to remain connected to their past communities, family, church, or tribe is essential to their persistence” (p. 4). The second stage is transition; this stage includes the in-between point where students are learning and adopting the “norms and patterns of behavior associated with membership...required for integration in the life of the college” (Tinto, 2006, p. 97). The third stage is incorporation; this stage refers to the level of integration a student has within the institution (Tinto, 2006).

In addition, there are interactions within the institutional environment that affect students' departure decisions: adjustment difficulty, incongruence, and isolation. In Tinto's (1993) model, persistence is the result of student integration into the academic and social systems of the institution. Each of these systems has a formal and an informal component. Tinto (1993) also states that there are external factors that exert influence on the collegiate experience which have an effect on the persistence of the student.

Tinto's student integration theory also states that a student can be integrated into one “sphere” of the college and still dropout due to a lack of integration into the other “sphere” and vice versa (Tinto, 1975). “Interactive experiences that further one's social and academic integration are seen to enhance the likelihood that the individual will persist within the institution until degree completion” (Tinto, 1993, p. 116). Pascarella and Terenzini (2005) state that there is a direct correlation between integration and a

student's commitment to both personal goals and their institution. These goals are achieved through the utilization of the many systems present within an institution.

“Colleges are made up of both academic and social systems, each with its own characteristic formal and informal structure and set of student, staff and faculty communities” (Tinto, 1993, p. 106). Tinto (1993) further states that there should not be an assumption that integration into one system is indicative of integration into the other. Indeed, a student can be successfully integrated into the academic system and not be integrated into the social system (Pascarella & Terenzini, 2005). However, these systems are entwined because they are bound within one environment, that of the college community (Tinto, 1993). The concepts of academic and social integration within Tinto's (1993) model are simultaneously occurring independently from the other as they are constrained within the collegiate environment.

### **Academic Integration**

Tinto's (1975, 1983, 1993) Integration Theory identified academic integration as a major concept that “. . . concerns itself almost entirely with the formal education of students” (Tinto, 1993, p. 106). There are two types of academic integration; formal integration relates to the formal experiences of students (e.g., classroom, faculty/staff interactions regarding course/classroom experience) and informal academic integration (e.g., faculty/staff interactions outside the classroom/course content, career readiness opportunities) (Tinto, 1975). Tinto (1993) also notes that interactions with faculty/staff can contribute to academic as well as social integration. The characteristics of the academic environment are:

... forms of integration or membership which occur in the formal academic structure (e.g., classrooms and laboratories) may lead to similar integration in the informal academic milieu of the institution. Consider contact with the faculty in informal settings outside the classroom. But its occurrence may be as much a reflection of what has taken place within the formal domain of the classrooms (e.g., patterns of faculty teaching) as it may be of what occurs informally out of class. (Tinto, 1993, p. 108)

### **Social Integration**

Social integration refers to the level and the degree of congruency between the individual and his or her social environment (e.g., extracurricular activities and peer-group interactions; Pascarella & Terenzini, 1980). Unlike academic integration, social integration relates to the informal education of students. It focuses on the students' affiliations with peers, faculty, and staff that occur largely outside the academic realm of the institution (Tinto, 1975). The characteristics of the social environment are defined separately as:

... experiences which take place in the formal social system of the college (e.g., extracurricular activities) from those which are largely informal (e.g., arising out of the day-to-day activities among differing members of the institution over matters not formally addressed in the rules and regulations of the institution). It is for this reason that student participation in extra-curricular activities (e.g., theater groups, student government) often leads to friendships that extend well beyond those formal activities. (Tinto, 1993, p. 108)

### **Studies Utilizing Tinto's Theory**

The evolution of Tinto's theory has spanned over a quarter of a century since his original model was published in 1975. There have been many studies that have sought to empirically test Tinto's model throughout its evolution and in a variety of settings (Pascarella & Terenzini, 2005). Earlier studies testing the Tinto model typically

accounted for between 15 to 30 percent of variance in college student departure decisions (Cabrera et al., 1992; Cabrera, Nora, & Castaneda, 1993; Pascarella, Duby, Vernon, & Rasher, 1981; Pascarella & Terenzini, 1980, 1983; Pavel, 1991; Pavel & Padilla, 1993; Stage, 1989; Stoecker, Pascarella, & Wolfe, 1988).

Since the latest revision in 1993, the constructs postulated in Tinto's theory have been operationalized to study the multitude of variables within the dynamic process of student retention (Berger & Milem, 1999; Braxton et al., 2000; Brown et al., 2010; Murguia, Padilla, & Pavel, 1991; Nora, 2001; Reisen, Zea, & Caplan, 1999; Zea et al., 1997). Furthermore, Pascarella and Terenzini (2005) state that Tinto's theory has moved beyond just explaining the process of student departure.

### **Critiques of Tinto's Theory**

The rise of Tinto's Interactionalist Theory of Student Departure (Tinto, 1993) within empirical studies to explain student departure has contradictory findings, especially when applied to diverse student populations (Pascarella & Terenzini, 2005). Particularly, throughout Tinto's model is the inherent assumption that if a student exerted appropriate energy into interactions with the institutional systems (i.e., social, academic) then that would promote student success. However, many critics have struggled with this conceptualization, as it places the burden solely upon the student and de-emphasizes the complex environmental and institutional factors that are inherently interwoven in the educational experience (Bean & Eaton, 2000; Bensimon, 2007; Hurtado et al., 1996; Rhee, 2008; Tierney, 1992a, 1992b, 1999). Additionally, the foundation of Tinto's model (1975, 1987, 1993) was based conceptually on a student severing ties with their

pre-college backgrounds in order to be successfully integrated into the institutional community. This inherently implies that a student's background is detrimental to their success within an academic institution rather than seeking to understand why students may not be able to integrate into the community (Attinasi, 1992; Guiffrida, 2005, 2006; Rendón et al., 2000; Tierney, 1992a, 1992b, 1999).

**French and Oakes.** The original theory as posited by Tinto proposed a two-factor theory of student integration, that of academic and social integration. However, French and Oakes tested the theory through utilization of the Institutional Integration Scale (IIS). The IIS was tested on first-time freshmen at a large public university in the Midwest and found the two-factor model of academic and social integration exhibited a high correlation between variables with an estimated correlation between variables of 1.17. The authors chose a conservative approach towards the model and did not allow the error variances to correlate “in order to avoid model fit that capitalizes on chance, thereby possibly disguising the real structure of the data” (French & Oakes, 2004, p. 93).

French and Oakes (2004) ran a follow-up confirmatory factor analysis (CFA) with a two-factor model of faculty and student integration instead of social and academic integration. This second model fit the data better and was also found to be consistent with other research (Mannan, 2001, as cited in French & Oakes, 2004), illustrating that social and academic integration are not mutually exclusive.

There is extensive literature that has looked at factors of social integration and academic integration in regards to student persistence (Hausmann et al., 2009; Hurtado & Carter, 1997; Nora & Cabrera, 1996). The following literature will highlight the factors

of (a) peer group interactions, (b) interactions with faculty, (c) faculty concerns for student development and teaching, (d) academic and intellectual development, and (e) institutional and goal commitment from empirical research as they relate to the formal and informal experiences within the constructs of academic and social integration and, more specifically, with students of color.

### **Institutional Integration**

This study uses as a theoretical foundation Tinto's (1993) revised Integration Theory to understand the development of sense of belonging and the components of the educational experience for Native American students that contribute to their intention to persist. The two central constructs of Tinto's theory are academic integration and social integration. Within this literature review the concepts of Academic and Social Integration will be viewed from two viewpoints as utilized by French and Oakes (2004), that of the Faculty and Student. The Institutional Integration Scale-Revised (IIS-R) assesses students' self-reported institutional integration comprised within five subscales: (a) Peer-Group Interactions, (b) Interactions With Faculty, (c) Faculty Concern for Student Development and Teaching, (d) Academic and Intellectual Development, and (e) Institutional and Goal Commitment. This scale identified that social and academic integration each has two factors, Faculty and Student, which contribute to overall integration in the institution. French and Oakes (2004) re-conceptualized Tinto's theory to more accurately measure between these two factors:

The first factor, labeled Faculty, suggests that students may have a sense of social and academic integration that is specific to the faculty members with whom they have interacted . . . the original model places student interactions with faculty

members in the area of social integration; however, these interactions also may enhance academic integration (Pascarella & Terenzini, 1980) . . . students may not differentiate between in-class and out-of-class interactions with faculty members.

The second factor, labeled Student, also assesses aspects of social and academic integration but in relation to peers and the general university environment. For instance, student social and academic integration may involve the formation of peer social networks and academic habits and interest as well as realization that the university environment is consistent with student expectations. (pp. 96–97)

The following review of literature will look at variables contributing to persistence and success, framed within the five subscales of the IIS-R. These subscales will be examined in relation to interactions with faculty, students, and the university environment.

### **Involvement versus Engagement**

Before delving into the following review of specific variables that have been shown to contribute to student persistence, it is important to briefly clarify the distinction between involvement and engagement. As mentioned previously, college students are experiencing social and academic integration simultaneously through both involvement and engagement. The difference between the two is best exemplified by Strayhorn (2012) as:

. . . *involvement* typically connotes behaviors and actions – that is, what students do and how they behave in college. . . Engagement is conceptually distinct in two ways. First, engagement refers to the amount of time and effort students devoted to their academic responsibilities (i.e., studies) and other activities (e.g., sports, clubs) . . . Sounds like *involvement*, doesn't it? Note, however, that engagement presupposes student success; it's completely feasible to be *involved in* academic or social activity of college, while failing to succeed in that endeavor. Second, engagement relates to how institutions invest resources and structure learning opportunities . . . college students' engagement has two key elements: what institutions do and what students do. (pp. 108–109)

**Involvement**

The current theoretical framework that has propelled research on the effects of involvement is based on Alexander W. Astin's (1984) Theory of Student Involvement. Astin (1999) developed a theory of student involvement that includes "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 518). Astin's (1999) involvement theory has also spurred empirical research to assess specific behavioral manifestations of involvement by proposing that students' involvement includes the amount of energy a student devotes to activities and experiences that create an investment in the social and academic arenas within the university environment. These experiences Astin (1984) refers to include studying, participating in student organizations, clubs and recreation, and interactions with faculty, staff, and peers formally and informally in the academic and social environments. These decisions about where to invest the resources of energy and time impact students' satisfaction with their college environment and improved their retention.

In conclusion, in utilizing the concept of integration in this study, it encompasses both involvement and engagement and moves beyond actions to include interactions as well as perceptions. These distinctions are important in this study because the presupposition of this study is that a student can be integrated into the collegiate social and academic environments and not feel a sense of belonging because the institution has not successfully engaged them as a part of the community.



### **Student Factor**

As noted in French and Oakes (2004), the social and academic integration within the collegiate experience “may not be mutually exclusive” (p. 94). In order to understand the complex interactions that occur in this environment, French and Oakes (2004) suggest utilizing the broader categories of Faculty and Student interactions.

This section of the literature review will highlight student interactions within the social environment, also known as social integration, of the collegiate experience. Tinto (1993) described social integration as “interactions among students...central to the development of the important social bond that serve to integrate the individual into the social communities of the college” (p. 118). Social integration has been posited as a significant factor in the retention and persistence of students in post-secondary education. (Pascarella & Terenzini, 1980, 1983; Tinto, 1975, 1987)

Another important component of the social integration process is involvement. More specifically, Astin (1999) defines student involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 518). Behavior is important in differentiating this component from other factors. Thus, Astin (1999) further asserts that “it is not so much what the individual thinks or feels, but what the individual does, how he or she behaves, that defines and identifies involvement” (p. 519). Involvement, as a construct for measuring students’ social integration in the persistence process, is important for understanding students’ motivation to remain in college (Astin, 1999). Specifically, for students of color, there is a need to make the

institutional environment seem smaller, less unwelcoming, and safer overall (Harper & Hurtado, 2007).

### **Peer-Group Interactions**

**Ethnic student organizations.** An important variable within the student factor of peer-group interactions is the interaction with students in a formal setting through student organizations (Berger & Milem, 1999). More specifically, as it relates to students of color, this section will take an in-depth look at participation in culturally-based organizations referred to here as Ethnic Student Organizations (ESOs). Ethnic Student Organizations are important because the central component of these organizations is the incorporation and the integration of the culture of students (Museus, 2008) and the ability of ethnic student organizations to foster culturally sensitive processes of adjustment and membership within the campus community (Museus, 2008).

Museus (2008) describes that ESOs “can play an important role in positively shaping the experiences and outcomes of racial/ethnic minority students organizations” (p. 569) at Predominately White Institutions (PWIs). In general, students of color described that ESOs provided them with a connection and were a good place to get support (Museus & Neville, 2012). Further, students identified that they needed to cross-collaborate in order to bring more change to the community. In addition Museus and Neville (2012) identified that the students in their study believed that cultural centers on campus were seen as positive aspects of campus but the larger campus community was not committed to embracing diversity because it was the seen as only the responsibility of these centers and not the whole campus community.

There have been a number of studies that have looked at ESO participation for different groups, specifically African American, Asian American, Latina/o, and Native American students' participation and perceptions of their involvement. The following studies are presented to understand the impact ESOs have on these populations of students.

***African American students.*** In a qualitative study of 12 African American and 12 Asian American students, Museus (2008) found that ESOs fulfilled three purposes for both African American and Asian American students on campus: cultural familiarity, cultural expression and advocacy, and cultural validation. Ethnic Student Organizations were able to provide an opportunity to facilitate the development of both academic and social integration through easing the adjustment and transition to campus by providing an enclave for cultural practice and peer support. An important note within the findings of this study is that several students interviewed identified that they participated in Greek Letter Organizations that were culturally based (Museus, 2008). This is important to note because often the default organizations that students of color are expected to participate in and identify with are the few organizations that cluster the students together (such as an African American Student Association). The culturally-based Greek Letter Organizations provided these students with another venue for support (Museus, 2008). The findings from Museus's (2008) study indicate that ESOs did not mitigate the pressure students of color felt to assimilate to the dominant campus culture; rather, the ESOs provided support to maintain students' cultural integrity, emotional support, academic support, and social support.

Flowers (2004) found the opposite was true in his study of 7,923 African American students who participated in the College Students Experiences Questionnaire between 1990 and 2000. The study did not find participation in ESOs as particularly impactful on educational outcomes of African American students. However, one limitation of Flowers' (2004) study is, although involvement contributed slightly in development, the students surveyed were "relatively uninvolved on campus and only participated minimally in most student involvement activities" (p. 469).

Campus involvement was the second most reported factor of a study on African American student persistence in small PWIs (Littleton, 2002). The identification of participation in ESOs for African American students on campus was seen as particularly significant, in that the students indicated these organizations were ones that created a more open environment and a cultural enclave that understood them (Littleton, 2002). Specifically of note from this study is that several of the students on each campus noted that the need for Greek Letter Organizations was identified as a positive way to bring more involvement on campus for African American students (Littleton, 2002).

Kimbrough and Hutcheson (1998) found that students participating in Black Greek-Letter Organizations (BGLOs) were more involved generally on campus and supported Astin's theory that students involved in Greek organizations were positively affected. Again, it is important to note that these are specific culturally-based Greek Letter Organizations. The students at Historically Black Colleges and Universities (HBCUs) were more involved in non-ethnic student organizations than African American students at PWIs (Kimbrough & Hutcheson, 1998). McClure's (2006) study of African

American men at a PWI in the South also found that participation in BLGOs facilitated students' connection to campus, integration, and helped the students mitigate the transition to the institution. The participants related their persistence at the institution to their BGLO experience because of providing an increase in self-efficacy, social support, and creating a safe place on campus (McClure, 2006). Further, the BGLO provided a connection not only within the campus community but also helped the students maintain a connection to their community outside of campus by providing them access to an external social network (McClure, 2006)

The findings from Jones et al. (2002) provide some clarity as to why African American students at an HBCU exhibited higher involvement in non-ethnic student organizations than African American students at a PWI. The African American students in this study identified that they were involved in ESOs because they felt they didn't belong in traditional mainstream organizations (Jones et al., 2002). This suggests that the impact a student's perception of campus climate has can lead them to seek out campus sub-cultures, such as ESOs, that provide a supportive and affirming environment.

***Asian American students.*** One of the only studies targeting Asian American students' participation in ESOs was Museus (2008). This study showed that an inability to find membership in cultures/subcultures on campus caused low graduation rates for both African American and Asian American students at PWIs (Museus, 2008). These findings were exemplified through the Asian American student's participation in ESOs and also in Asian American Greek letter organizations (Museus, 2008).

***Latino students.*** Hurtado and Carter (1997) measured sense of belonging for Latino students on campus. The authors, while not specifically testing for persistence, theoretically linked the construct of sense of belonging to affecting behavior of students to include their sense of affiliation with the institution and ultimately persistence. Hurtado and Carter (1997) also found that students who belonged to ESOs and perceived the campus environment to be more racially-ethnically tense reported a higher sense of belonging than ESO non-members who reported the same. This finding supports the assumption that membership within ESOs mediate the negative effects of an adverse campus racial climate. In addition, the Hurtado and Carter (1997) study found that members who were involved in ESOs did not have a significantly higher sense of belonging overall than non-members in general. While there was no significant difference, they did note that members' sense of belonging was not lower than non-members (Hurtado & Carter, 1997). The researchers hypothesized that one reason for this could be because they may experience both marginality and group cohesion at the same time (Hurtado & Carter, 1997).

Jones et al. (2002) found that Latino students reported feeling the need to be more involved in ESOs because it would enable them to be change agents in the mainstream student organization culture and within the broader campus community. In a qualitative study, Guardia and Evans (2008) found that members of Latino Greek Letter Organizations (LGLOs) sought out membership specifically because LGLOs developed and supported the Latino identity of its membership that was lacking on the campus community.

*Native American students.* In the first study to quantitatively look at a longitudinal study of Native American students, Pavel and Padilla (1993) used structural equation modeling to examine and validate Tinto's model (1987, 1993) for Native American students. The researchers sampled sophomore and senior cohorts in the High School and Beyond survey sponsored by the National Center for Education Statistics from 1980-1986. The researchers determined a weak fit between the data and Tinto's model. However, Pavel and Padilla (1993) concluded their findings supported the idea that culturally-relevant support programs and ethnic student enclaves (which includes ESOs) are important factors in degree attainment and help Native American students manage the transition to the collegiate environment.

An interesting study by Guillory and Wolverton (2008) highlighted the differences of Native American student experiences of factors related to their persistence and barriers. Students' experiences were compared with faculty and administrators' perceptions of Native American students' success factors and barriers. In this qualitative study, thirty Native American students and fourteen state board of higher education representatives, university presidents, and faculty (administrators) from several PWIs, with approximately 1–2% Native American student populations, were interviewed. The researchers asked the Native American students and the presidents/faculty and state board of higher education members to identify “three or four most important factors that helped them persist . . . and . . . barriers that must be overcome by students trying to complete their education” (Guillory & Wolverton, 2008, p. 74). Whereas administrators viewed finances as a persistence factor, the students cited that family connection and giving back

to their Native community was more important than finances in affecting their persistence (Guillory & Wolverton, 2008). Another stark contrasting finding is that administrators placed an emphasis on specific academic programs as the most salient success factor for Native American students; however, none of the Native American students identified academic programs as a factor in any of the interviews (Guillory & Wolverton, 2008). The Native American students' social support, in the form of multicultural centers and other cultural enclaves, were identified as primary ways to simultaneously maintain cultural values while integrating into the campus social environment were more salient in their persistence (Guillory & Wolverton, 2008).

### **Peer Support**

As participation in student organizations can facilitate the social integration of a student, so too, do the informal aspects of peer interaction within the campus community. Peer support has been cited in seminal theoretical models of student persistence as an important factor that affects the persistence of students (Astin, 1993; Tinto, 1993).

In general, there are two types of peer support that can influence persistence in college students: the availability of peer support and lack of peer support. Dennis, Phinney, and Chuateco (2005) specifically noted that ethnic minority students "used both perceived support and perceived lack of support from family and peers, in order to predict college achievement and adjustment" (p. 226). In a study on first- and second-year Latino college students, Hurtado et al. (1996) found that peer support was reported to be a significant factor in the social adjustment by the Latino students surveyed, with 38% reporting these individuals provided the most support during the first year.



Furthermore, this study also noted that maintaining social relationships was perceived to be the second most difficult aspect of the first year, following academic adjustment (Hurtado et al., 1996).

### **Faculty Factor**

The faculty factor is included as a separate factor within French and Oakes (2004) because “students may have a sense of social and academic integration that is specific to the faculty members with whom they have interacted” (p. 96). As mentioned previously, French and Oakes (2004) contend that since the social and academic integration experiences are not mutually exclusive, there is a need to study the integration spheres together with regards to faculty. In the literature this factor is most often related to academic integration; however, for the purposes of this study, the researcher will categorize faculty within social and academic integration.

**Faculty interactions.** There is evidence suggesting that interactions with faculty, both formally and informally, are positively correlated to student success (Kuh, Kinzie, Buckley, & Hayek, 2006). Generally, having relationships with faculty outside of the classroom—research with faculty, being a guest in faculty residences, conversing with faculty—increase students’ intellectual development and perception that faculty care and have a concern for the student (Astin, 1993; Graunke & Woosley, 2005; Reason, Terenzini, & Domingo, 2006). As students of color are more apt to come into college lacking the social and cultural capital to be successful (Strayhorn, 2010) within the higher educational environment it is important to engage these students within the institution in academically meaningful learning opportunities both inside and outside the classroom

(Strayhorn, 2010). Faculty members are critical actors in providing meaningful learning opportunities. African American male students enrolled in HBCUs reported a higher perception of care and concern from faculty members for students' development, academic development, intellectual development, and sense of belonging that ultimately influenced those students' academic achievement (Palmer & Gasman, 2008; Palmer & Young, 2009).

Native American students identified that the role of faculty and staff in mentoring and promoting academic integration among Native American students had the most significant relationship to persistence of non-cognitive variables in the study (Gloria & Robinson Kurpius, 2001). Another study cited that Native American students specifically identified that perception of care and concern from faculty was of importance in their institutional integration (Jackson, Smith, & Hill, 2003). Native American students that had positive faculty-student personal interactions felt they "had (a) a place to go to ask questions about the college or university, and (b) an important personal connection to the college or university" (Jackson et al., 2003, p. 554). These findings are supported by other research with Native American students that identified the importance of faculty-student relationships as a positive influence on success (Brown & Robinson Kurpius, 1997; Ortiz & HeavyRunner, 2003; Waterman, 2004).

**Curricular experience.** The curricular experience is a particularly salient variable for all students as interactions in class provide a common experience for all college students. In general, positive interactions with faculty are positively correlated to academic success of students (Kuh et al., 2006). In a study of sense of class belonging

within the classroom setting, Freeman et al. (2007) reported that individual characteristics of instructors such as interaction, encouragement of student participation, and instructor care and warmth, were all positive predictors of increased sense of belonging within the classroom for students. In addition, the increased sense of class belonging was related to the student-reported sense of self-efficacy in classroom as well as task-value of the class work (Freeman et al., 2007). These findings have been consistently linked to later research connecting faculty characteristics and a supportive classroom environment that engenders positive faculty-student support and relationships increasing the academic achievement as well as overall success of students enrolled in the institution (Braxton et al., 2000; McKinney, McKinney, Franiuk, & Schweitzer, 2006; Micari & Pazos, 2012; Strayhorn & Saddler, 2009; Strayhorn & Terrell, 2007; Zumbrunn, McKim, Buhs, & Hawley, 2014).

### **Institutional Factor**

Tinto's (1975) Student Integration Model postulates the success of students to persist to graduation is dependent on the integration into the institutional environment. Further, French and Oakes (2004), to help quantify the measurement of this theoretical construct, delineated two main factors, faculty and student. In addition, there was another factor, institutional integration that is related to their overall integration. This is measured as a subscale in the IIS-R and can be linked to a student's general perception of the institutional environment.

**Campus climate.** Environmental factors within the campus community have been cited as impacting the adjustment of racial/ethnic minority students and can lead to

feelings of alienation, disengagement from the campus community, and marginalization (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Hurtado & Carter, 1997; Museus, Nichols, & Lambert, 2008). The importance of a student's integration into the social and academic environments of the campus community, as previously mentioned, makes the construct of perceptions of campus racial climate particularly salient for students of color (Cabrera et al., 1999; Hurtado & Carter, 1997; Museus et al., 2008). The effect that experiencing a negative campus climate has on students of color can lead to detrimental impacts on their persistence. Several studies (Brown, 2005; González, 2002; Huffman, 2001; Hurtado & Carter, 1997; Jones et al., 2002; Maestas et al., 2007; Murguia et al., 1991; Museus et al., 2008; Nora & Cabrera, 1996; Pewewardy & Frey, 2004) have found that students of color have negative perceptions of their campus racial climate. This section of the literature review specifically looks at students' psychological sense (perceptions) of the institutional climate towards diversity and racial/ethnic issues to understand what role, if any, students of colors' perceptions have on their persistence.

Nora and Cabrera (1996) examined the effects of students' perceptions of prejudice and discrimination on persistence for 831 first-time, full-time freshmen at a PWI in the Midwest. Nora and Cabrera (1996) combined Tinto's Student Integration Model and Bean and Metzner's Student Attrition Model to develop the survey and, utilizing structural equation modeling to analyze the data, determined:

- (a) the influential nature of academic preparedness within the persistence process,
- (b) the extent to which separation from family and community facilitates a successful transition to college,
- (c) the role of perceptions of prejudice on the adjustment to college environments and on college-related outcomes, and
- (d) the

extent to which existing models of college persistence are unique to nonminority students. (p. 139)

Their findings indicated that minority students reported a higher level of perception of a discriminatory campus climate than White students (Nora & Cabrera, 1996). In addition, minority students reported, on average, that they perceived more prejudicial attitudes from faculty and staff and experienced more negative interactions with peers both in and out of the classroom than their White student peers (Nora & Cabrera, 1996). However, Nora and Cabrera (1996) noted that minority students who perceived lower levels of prejudice they reported higher levels of positive interaction with their faculty and staff on campus than White students and were generally more satisfied with their peer group interactions. These findings suggest that, although minority students may experience positive interactions with others, they still have an overwhelming perception that the institutional climate is discriminatory and the minority students used their relationships with significant others to mitigate the negative perceptions (Nora & Cabrera, 1996). Further, as the effect of campus racial climate was indirect, suggesting that perception of campus racial climate does not have a significant influence on persistence, Nora and Cabrera (1996) posit that other culturally appropriate factors (e.g., cultural identity) need to be examined to explain more of the variance in the persistence process. The data from this study further suggest that minority students' negative perceptions of campus racial climate were related to a negative effect on their adjustment to the academic and social environments of the campus community (Nora &

Cabrera, 1996). A major limitation of this study was that the researchers did not disaggregate the data to see the effects on each subpopulation of minority students.

In their six-year longitudinal study examining how perceptions of campus racial climate influenced degree completion, Museus et al. (2008) explored differences by racial groups. Their findings indicate that the populations of students in this study, Black, White, Asian, and Latina/o, perceive the campus racial climate differently, resulting in varying influence on persistence and degree completion (Museus et al., 2008). Although Black students had the most negative perception of the campus racial climate, there was only a slight difference in those found in Asian and Latina/o students (Museus et al., 2008). The effects of the campus racial climate, in this study, were mainly found to be indirect “via academic involvement, social involvement, and institution commitment” (Museus et al., 2008, p. 127). Ultimately, this study supports the notion that institutional climate does effect the collegiate experience for students.

In a qualitative study focusing on students of color perspectives and experiences of campus climate, school resources, and quality of student service programs, Jones et al. (2002) sought out students who frequented cultural centers at the institution. Four different focus groups representing racial minority groups (African American, Asian Pacific Americans, Chicano/Latino, and Native Americans) were interviewed. A common theme emerged from each focus group in which the students criticized the university commitment to diversity (Jones et al., 2002). The students described feeling that they had to be the voice of their culture to the campus community. They also felt that it was their responsibility to break down stereotypes and challenge the status quo in

the campus community with their interactions with others. Specifically, Latino and Native American students identified recent campus racial incidences and the inaction of administrators that further reinforced an atmosphere of open hostility for these students (Jones et al., 2002).

Maestas et al. (2007) investigated the factors that impacted sense of belonging at a Hispanic Serving Institution that is also a minority-majority institution (i.e., minority students are the majority of students enrolled). The data from this study found three variables were significant in positive predictors of sense of belonging with the institution: socializing with different racial/ethnic group members, institutional support of affirmative action goals, and positive relationships with faculty and students' feeling that faculty were interested in their development. In addition, experiencing positive behaviors toward diversity issues was slightly significant and had a positive impact on sense of belonging. This study provides important information for assisting in creating a welcoming and supportive campus climate for students of color, allowing them to be able to participate and fully integrate into the campus community. A limitation to this study is that the data was not partitioned to account for each ethnic minority group to understand what impact these factors had on specific groups. However, because the majority of participants in this study were minority students the conclusions support the general consensus that students of color are impacted by the racial climate on campus.

Relatively few studies have sought to disaggregate the data and specifically look at African American, Asian American, Latina/o, and Native American students'

perceptions of campus racial climate. The following studies have sought to identify the specific impact this experience has on these population of students.

***African American students.*** Museus et al. (2008) explored the relationship between campus racial climate and degree completion. The researchers further expounded on their research question through specifically looking at what types of variables impact the relationship and how each racial/ethnic group is influenced differently. They found that African American students were the least satisfied with racial climate compared to Asian, Latino, and White students in the sample.

***Asian American students.*** Burns, Harper, Hildebrand, and Moore (2000) studied Asian and Asian American students after a recent hate crime near campus to ascertain what effect experiencing such an event would have on the campus climate for students. They found that, although the emotional responses of the students did not significantly change due to the hate crime, there was a statistically significant increase in campus involvement and engagement with faculty for Asian students after the hate crime. This study supports the general research (Burns et al., 2000) showing that students are affected by the campus racial climate and further asserts that the community in which the campus is situated also affects campus climates.

In the aforementioned longitudinal study by Museus et al. (2008), the researchers found that Asian American students reported lower satisfaction with their campus racial climate than their White counterparts and were only slightly higher than their African American peers. Jones et al.'s (2002) research supports the findings that Asian American students experienced a lower satisfaction with the campus racial climate and students in



their study felt that the campus celebrated and legitimized mainstream culture and was unresponsiveness to diverse student issues.

***Latino students.*** Hurtado and Carter (1997) questioned Tinto's postulation that students must separate from their background. Perceptions of a hostile climate had a significant negative direct effect on Latino students' sense of belonging in the third year of college (Hurtado & Carter, 1997). If the student perceived the campus as hostile during the second year, it negatively impacted their sense of belonging in the third year. The findings from this study are important for institutions to consider as a reflection of how climate can affect student engagement as "... perceptions of a hostile climate for diversity were negatively associated with all adjustment measures" (Hurtado et al., 1996, p. 145).

Museus et al. (2008) found that Latino students' satisfaction of the campus racial climate ranked lower than White students, exhibited strong positive effects, and was the most powerful predictor for Latino students on institutional commitment. Another interesting finding from this study is that Latino students' perception of campus racial climate had a moderate and negative effect on social involvement and a positive indirect effect on completion through social involvement. This finding illustrated that "higher levels of satisfaction with the racial climate were related to lower levels of social involvement and, consequently, to more positive degree completion outcomes for Latina/o students" (Hurtado et al., 1996, p. 145). This was significant and in direct contradiction with the researchers' expectations.

In an in-depth, two-year qualitative study of two Latino/Chicano students, Museus et al. (2008, p. 127) found that major elements of campus culture (i.e., the social, physical, and epistemological manifestations of the institution) reinforced the perception that value was derived from the predominant White culture. The students in this study felt that the campus climate caused significant barriers to these students' persistence. Conversely, González (2002) found that Hispanic and Native American students' perceptions of their place in the larger campus environment were positively impacted by maintaining their cultural identity and feeling supported in their ethnic identity.

*Native American students.* In a quantitative study at a Mid-western institution, Pewewardy and Frey (2004) sought to

(a) assess similarities and differences in the racial attitudes between American Indian students and non-Indian students and (b) to determine whether American Indian students' satisfaction regarding student support services differed from that of non-Indian students. (p. 33)

The sample consisted of 30 Native American students and 245 White students, which was representative of the statistical representation of the student population (Murguia et al., 1991). The researchers found that Native American students' perceptions of differences in races in intellectual capacity, inferiority, and ability to succeed were significantly different from White students. Also, Native American students were significantly higher in reports of experiencing frequent discrimination than White students.

In a qualitative study of 69 Native American students, Pewewardy and Frey (2004) compared two types of traditional Native American students: estranged and transculturated. Both types of students were culturally traditional; however, the

estranged students felt alienated on campus and were not as successful as the transculturated students. The transculturated students were able to implement strategies to overcome their sense of a hostile environment and be more successful in college. Conversely, the culturally estranged students were confronted with the notion that they had to assimilate to be successful, and in response to this pressure, they retaliated by leaving the institution. The transculturated students used their Native American identity as an anchor to navigate the dominant structure while still maintaining their identity.

Huffman (2001) also found a high prevalence and degree of racism with which the fifteen Native American students in their qualitative study had dealt. The students identified that the racism was both passive and active. The passive racism typically manifested in either the student being marginalized within the setting or “being singled out as a representative of their race or culture” (Jackson et al., 2003, p. 556). Another theme that emerged in dealing with racism is that students typically experience active racism within the classroom or curricular environment whenever historical or cultural issues about oppression arise, and not necessarily only when Native American history was brought up. Jackson et al. (2003) identified that in spite of the difficult experiences these students encountered they showed remarkable resilience that was only partially explicated within the study. The main sources of support the authors identified that were systemic in nature are family and college support; however, there were other individual characteristics identified.

The Native American students in Jones et al.’s (2002) study felt they were discriminated against and isolated from the main campus culture. Those who were not

phenotypically Native American reported having more difficulty on campus being able to practice their culture without questioning from other students.

Jackson et al. (2003) studied whether gains in Native American students' academic and personal learning could be predicted from several measures of involvement (both formal and informal). The study used the College Student Experiences Questionnaire survey with a total sample size of 643. Perceptions of campus commitment to diversity, the quality of relationship with faculty members and frequency of time spent in conversation were all predictors of academic learning. In addition, Lundberg (2007) was able to predict academic and personal learning from the perceptions of the campus commitment to diversity, conversations engaged in with others, and use of campus facilities. This underscores previous research showing that Native American students' perceptions and their lived experiences within an environment have a significant impact on collegiate experience. Having a campus environment that not only seeks to increase the diversity of Native American students but embrace in an opening and welcoming environment various backgrounds of students has a positive impact on students' success. One major limitation to this study is that the researcher excluded students who identified as Native American and any other ethnicity.

The implications from a review of the literature on campus racial climates are important in understanding the role that a welcoming and positive experience within the campus community is to the persistence process for students of color. As there are many divergent interpretations of the data and contraindications of the effect of campus racial climates on minority student samples, there is a need to disaggregate data by specific

groups in further providing information about how these factors play a role for each population (Lundberg, 2007).

### **Conclusion**

In conclusion, these findings indicate that academic and social integration opportunities within higher education environment influence sense of belonging. It is clear that a student's sense of belonging influences their collegiate success. What is not clear are what factors are most impactful to Native American students' sense of belonging and persistence.

### **CHAPTER III**

### **METHODOLOGY**

This chapter will discuss the methodology that was employed in this study to explore sense of belonging and intention to persist for Native American college students. The chapter will begin by introducing the key research questions and hypotheses; describing the details of the research methodology, including the research design; then will describe the population and sampling procedures; and, finally, identifying the data analysis procedures that were conducted to answer the research questions. The purpose of this study was to explore sense of belonging for Native American college students; specifically, the study sought to understand if institutional integration and cultural identity contribute significantly to sense of belonging for these students. In addition, this study also sought to determine if sense of belonging is a significant predictor of intention to persist for Native American college students.

#### **Research Questions and Hypotheses**

The following research questions and hypotheses about Native American students' sense of belonging guided this study:

1. To what extent does institutional integration contribute to overall sense of belonging for Native American college students?

$H_0$ : Institutional integration does not contribute to overall sense of belonging for Native American college students.

*H<sub>I</sub>*: Institutional integration does contribute to overall sense of belonging for Native American college students.

- a. Of the items examined, what is the most significant predictor of sense of belonging?
2. To what extent does cultural integrity predict sense of belonging for Native American college students?

*H<sub>0</sub>*: Cultural integrity does not contribute to overall sense of belonging for Native American college students.

*H<sub>I</sub>*: Cultural integrity does contribute to overall sense of belonging for Native American college students.

- a. Of the items examined, what is the most significant predictor of sense of belonging?
3. Does having a higher sense of belonging predict intention to persist for Native American college students?

*H<sub>0</sub>*: Sense of belonging is not a predictor of intention to persist for Native American college students.

*H<sub>I</sub>*: Sense of belonging is a predictor of intention to persist for Native American college students.

### **Research Design**

This study employed a quantitative cross-sectional, multi-institutional research design using a survey instrument adapted by the researcher to fit the needs of this study (see Appendices). A quantitative research analysis was chosen due to its objective nature

to measure the variables of institutional integration, cultural integrity, sense of belonging, and intention to persist. In addition, much of the research on the experiences of Native American students within higher education has been qualitative; therefore, the need exists for the collection of quantitative data that could be tracked over time.

### **Study Population**

The data for this study was collected from 154 Native American students at Non-Native Colleges and Universities (NNCUs), private and public four-year colleges or universities in the United States. NNCUs were chosen in order to understand the experiences of Native American students at non-Tribal Colleges and Universities. The delineation of utilizing participants from these institutions allowed the researcher to obtain responses from participants from other institutional types (e.g., Minority Serving Institutions, Native American Serving Institutions, Hispanic Serving Institutions, and Predominately White Institutions). As noted in Chapter I, regardless of the institutional type, Native students still comprise a significantly small percentage of the student bodies at NNCUs.

### **Data Collection Procedures**

This study utilized a convenience sampling method (Rea & Parker, 1997; Wiersma, 2000). Given the low Native American population in higher education and the specific cultural needs of the population, purposive and snowball sampling was chosen. In considering the sampling methods, the likelihood that a random sample of campuses with a significant population of Native American students would produce the number of participants necessary to conduct an appropriate analysis of the data was unlikely;



therefore, the researcher employed multiple ways to obtain access to the Native American student community.

The investigator received support (see Appendix A) from individuals representing several Native American higher education associations and institutions (NASPA-Indigenous Peoples Knowledge Community ACPA-College Student Educators International-Native American Network, National Indian Education Association, and American Indian Graduate Center) to send a scripted email with a survey link to their institutions' Native American student listservs to participate (see Appendix B). The email contained a script for the professionals to send to their student listservs and post to Facebook, including the purpose of the study and the online link to participate in the survey. Having the organizations send the invitation provided added credibility to the study and to the researcher.

The introduction of the survey included the informed consent document confirming that the study was approved through the UNCG Institutional Review Board (see Appendix C). The consent form was provided to participants both electronically and in a printed version for their records. The survey was hosted through UNCG's online assessment platform—Qualtrics. The University of North Carolina at Greensboro endorses and supports Qualtrics as the secure assessment utility of the University. No personally identifiable information was collected, and an incentive was offered for participants. Upon completion of the survey used for data collection, participants were taken to a "Thank You" page that contained a link to a separate survey that collected contact information. If completed, this entered participants into a drawing for one of six

\$25.00 gift cards from Amazon.com. Names were randomized in an Excel sheet from the entries downloaded from the Qualtrics survey. The researcher utilized a random number generator to choose six numbers associated with an entry in the Excel sheet.

### Participants

Responses were gathered from 154 respondents. The majority of participants reported as identifying as only Native American (80%), with the rest identifying as Native American and another ethnicity (20%; see Table 1).

Table 1

Participant Ethnicity by Frequency and Percentage ( $N = 154$ )

Ethnicity	<i>n</i>	%
Native American alone	123	79.9
Native American and another ethnicity	31	20.1
Totals	154	100.0

A total of 80 tribes were represented. The participants' tribal representations are listed alphabetically and in order of number of times reported in Table 2. The largest number of participants identified their tribal affiliation as Lumbee ( $N = 57$ ) followed by Cherokee ( $N = 16$ ) and Navajo (Diné) ( $N = 15$ ).

One hundred sixteen women (75%) and 36 men (23%) completed the survey. One (1) participant identified as two-spirit and another participant (1) chose not to answer. Table 3 illustrates the gender distribution.

Table 2

Tribal Representation ( $N = 154$ )

Tribe	<i>n</i>
Lumbee	57
Cherokee (Cherokee Nation of Oklahoma)	16
Navajo (Dine)	15
Tohono O'odham	5
Hopi	4
Oneida Tribe of Indians of Wisconsin	4
Choctaw	3
Coharie	3
Haliwa-Saponi	3
Tohono O'odham	5
Waccamaw Siouan	3
Bad River Band of Lake Superior Chippewa Tribe	2
Blackfoot	2
Cheyenne River Sioux Tribe	2
Eastern Band of Cherokee Indians	2
Lumbee	2
Menominee	2
Native Hawaiian	2
Ojibwe	2
Onondaga	2
Pawnee	2
Red Cliff Band of Lake Superior Chippewa	2
Sac and Fox	2
St. Regis Mohawk Tribe	2

Table 2

(Cont.)

Tribe	<i>n</i>
Apache	1
Arikara	1
Cheraw	1
Comanche	1
Coos	1
Fond du Lac Ojibwe	1
Gila River Indian Community	1
Hopi	1
Inupiaq	1
Ioway	1
Karuk	1
Kiowa	2
Lower Umpqua	1
Makah	1
Mandan	1
Mashpee-Wampanoag	1
Mesquakie	1
Mohawk	1
Mono	1
Nanticoke	1
Nooksack	1
Norther Piute	1
Occaneechi Band of the Saponi Nation	1

Table 2

(Cont.)

Tribe	<i>n</i>
Oneida	1
Otoe-Missouria	1
Piscataway	1
Ponca Triba of Nebraska	1
Ponca Tribe of Oklahoma	1
Purepecha	1
Rosebud Sioux	1
Saltriver Pima	1
Samoan	1
Santee Sioux	1
Sappony	1
Seneca Nation	1
Shawnee	1
Shinnecock	1
Sioux	2
Siuslaw	1
Skway	1
Suquamish	1
Tarasco	1
Tewa Pueblo	1
Texas Band of Yaqui Indians	1
Tolowa at Smith River Racheria	1
Tonowanda Seneca	1
Turtle Mountain Chippewa	1

Table 2

(Cont.)

Tribe	<i>n</i>
Tuscarora	1
Upper Cayuga	1
Waccamaw Siouan	1
White Mountain Apache	1
Yakama	1
Yokut	1
Yurok	1
Zuni	1
<b>Tribal Representation from Survey Respondents</b>	<b>196</b>

*Note.* The total N is more than the number of participants due to reporting multiple tribal identities.

Table 3

Participant Gender by Frequency and Percentage (*N* = 154)

Gender	<i>n</i>	Percent
Male	36	23.4
Female	116	75.3
Did Not Answer	1	0.6
Other	1	0.6
Totals	154	100.0

Women were the largest percentage of the participants, which follows the trend of national statistics of Native American students within higher education (DeVoe & Darling-Churchill, 2008). Nationally, the majority of Native American students enrolled

in higher education are women (60.7%) with men only being 39.3% of all Native Americans students enrolled (DeVoe & Darling-Churchill, 2008).

Participants for this study were predominately aged 18–24 (58.6%), with the mean age of participants being 21–24 ( $M = 2.45$ ; see Table 4).

Table 4

Participant Age by Frequency and Percentage ( $N = 154$ )

Age Range	<i>n</i>	Percent
18 - 20	44	28.6
21 - 24	46	29.9
25 - 34	31	20.1
35 - 44	20	13.0
45 - 54	10	6.5
55 - 64	2	1.3
65 +	1	0.6
Totals	154	100.0

The researcher did not explicitly state that undergraduate students were the preferred sample so graduate students were included as part of this study. However, the majority of respondents were enrolled as undergraduates (80%; see Table 5). Finally, the majority of respondents lived off-campus (79%) with a spouse (27%) or a roommate (23%) followed by parents (14%) and with children (13%). This indicates that Native American students are typically not living on-campus or alone while off-campus (see Table 6).

Table 5

Participant Class by Frequency and Percentage ( $N = 154$ )

Class	<i>n</i>	Percent
Freshman	17	11.0
Sophomore	23	14.9
Junior	29	18.8
Senior	54	35.1
Graduate Student	31	20.1
Totals	154	100.0

Table 6

Off-Campus Participant Living Situation ( $N = 154$ )

	<i>n</i>	Percent
Live Alone	13	9.0
With Roommate	35	24.3
With Kids	20	13.9
With Parents	21	14.6
With Relative	13	9.0
With Spouse	42	29.2
Total	144	100.0

### Instrumentation

Three instruments were used for this study to measure the key constructs of interest: the Institutional Integration Scale-Revised (IIS-R; French & Oakes, 2004) to measure institutional integration and intent to persist; the Sense of Belonging Scale



(SOBS; Hurtado & Carter, 1997) to measure psychosocial sense of belonging; and the North American Indigenous College Students Inventory (NAICSI; Marroquin & McCoach, 2014) to measure level of cultural integrity.

### **Institutional Integration Scale–Revised (IIS-R; French & Oakes, 2004)**

Institutional integration was measured using the Institutional Integration Scale–Revised (IIS-R; French & Oakes, 2004). The IIS-R contains 34 questions distributed among five subscales (see Appendix D). The subscales, number of items, coefficient  $\alpha$ , and an example from each subscale are: (a) Peer-Group Interactions, 10 items,  $\alpha = .84$  (e.g., “The student friendships I have developed have been personally satisfying”), (b) Interactions With Faculty, 5 items,  $\alpha = .89$  (e.g., “My nonclassroom interactions with faculty members have positively influenced my intellectual growth and interest in ideas”), (c) Faculty Concern for Student Development and Teaching, 5 items,  $\alpha = .88$  (e.g., “Many faculty members I have had contact with are genuinely interested in students”), (d) Academic and Intellectual Development, 8 items,  $\alpha = .82$  (e.g., “Most of my courses have been intellectually stimulating”), and (e) Institutional and Goal Commitment, 10 items,  $\alpha = .76$  (e.g., “It is important for me to graduate from this university”). Participants responded using a 5-point Likert scale (1 = *Strongly Agree* to 5 = *Strongly Disagree*). Two items from the institutional goal commitment subscale on the IIS-R were used to measure intention to persist:

- It is important for me to graduate from my current institution.
- I am confident that I made the right decision in choosing to attend my institution. (French & Oakes, 2004)

The total score on the instrument was used in conjunction with the subscales scores.

The Institutional Integration Scale-Revised (IIS-R) by French and Oakes (2004) is a revised version with improved reliability and validity over the original Institutional Integration Scale developed by Pascarella and Terenzini (1980). The IIS was designed to measure the theoretical constructs of Tinto's (1975) theory of students' perceived levels of academic integration, social integration, and institutional integration. The original IIS reported alpha reliabilities on the subscales ranging from .71 to .84, however the IIS did not provide construct validity evidence due to its exploratory nature.

According to French and Oakes (2004), the IIS-R still measures academic, social, and institutional integration but does so through two latent factors: Faculty and Student. The IIS-R showed improved reliability and validity over the IIS while still being founded in theoretical models of integration because, as the authors suggest,

social and academic integration may not be mutually exclusive . . . students may perceive and report levels of social and academic integration for a particular group (i.e., faculty or peers) compared with a combined perception of social and academic integration across groups. (French & Oakes, 2004, p. 94)

French and Oakes (2004) reported a Cronbach's alpha of .92 for the overall IIS-R, with Cronbach's alpha ranging from .61 to .86 for the subscales, and .92 for the total score. The validity of this scale is supported by appropriate fit of the subscales structure model to the data (French & Oaks, 2004). The revised model structure has been further validated in studies that show support that the overall scale and subscales discriminate the group differences of high and low integration better than the original and remains constant regardless of differences in samples (i.e., gender; Breidenbach & French, 2010;

French & Oakes, 2004). The importance of the validity and reliability of this scale and its ability to discriminate is due to the implications it can have on the student population. In other words, “If the IIS is to be used to identify students for intervention or to predict student success effectively, it is crucial to ensure that measurement nonequivalence across groups is not the source of selection, but rather students’ level of integration, among other factors” (Breidenbach & French, 2010, p. 346).

Because this study utilized this measure with Native American students, reliability analyses were run with the current participants. The current study reported a Cronbach’s alpha of  $\alpha = .94$  for the total scale and the following for each subscale: Peer Group Interactions  $\alpha = .91$ , Interactions with Faculty  $\alpha = .89$ , Institutional Goal Commitment  $\alpha = .57$ , Faculty Concern with Student Development and Teaching  $\alpha = .91$ , and Academic and Intellectual Development  $\alpha = .78$ . There is one note of caution: one of the items in the Institutional and Goal Commitment subscale was unintentionally omitted from the survey, which could affect the reliability of that subscale.

### **Sense of Belonging Scale (SOBS; Bollen & Hoyle, 1990)**

Students’ sense of belonging was measured using the Sense of Belonging Scale (SOBS) (see Appendix D) from Bollen and Hoyle (1990). The SOBS consists of three questions to assess the students’ perception of membership and belonging within the institution and campus community. Participants respond using a 5-point Likert scale (1 = *Strongly Agree* to 5 = *Strongly Disagree*).

The Cronbach’s alpha, which measures internal consistency of the SOBS, was reported at .97 (Hurtado & Carter, 1997). The SOBS has been validated with other

populations of students, especially different racial/ethnic populations, and shows consistent findings that support its ability to discern sense of belonging within the university community and students' perceptions of being part of the university community (France, Finney, & Swerdzewski, 2010; Johnson, Soldner, Leonard, Inkelas, et al., 2007; Johnson, Soldner, Leonard, Alvarez, et al., 2007; Museus & Maramba, 2011; Spanierman et al., 2013). In this study, the Cronbach's alpha for the Sense of Belonging scale was  $\alpha = .96$ .

**North American Indigenous College Students Inventory (NAICSI; Marroquin & McCoach, 2014)**

Cultural integrity was measured using the North American Indigenous College Students Inventory (NAICSI; Marroquin & McCoach, 2014). The NAICSI (see Appendix D) was developed and is grounded in transculturation theory (Huffman, 2011). This is the first scale developed to specifically measure cultural integrity through questions relating to Native American cultural factors. The NAICSI contains 37 items, comprising eight factors: faculty support, staff support, social support, family support, tribal community support, institutional support, cultural reciprocity, and cultural resiliency. The factors are arranged in seven subscales, with the addition of two isolation items, measured on 7-point Likert scales with 1 indicating strongly disagree and 7 indicating strongly agree. The subscales, number of items, coefficient  $\alpha$ , and an example from each subscale are: (a) Faculty/Staff Support, 7 items,  $\alpha = .87$  (e.g., "When I make cultural links to class content, my professor respects my comments"), (b) Family Support, 6 items,  $\alpha = .88$  (e.g., "My family is actively involved with my education"), (c) Social

Support, 6 items,  $\alpha = .82$  (e.g., “My peers show respect for my culture”), (d) Tribal Community Support, 7 items,  $\alpha = .92$  (e.g., “My tribal/village community wants me to succeed”), (e) Institutional Support, 5 items,  $\alpha = .84$  (e.g., “There is no support for Native American/Alaska Native cultural awareness on campus”; reverse scored), (f) Cultural Reciprocity, 3 items,  $\alpha = .82$  (e.g., “Since starting college, I have learned about other people’s culture”), (g) Cultural Resiliency, 3 items,  $\alpha = .85$  (e.g., “While at college, I feel like I have had to change who I am in order to be successful”; reverse scored; Marroquin & McCoach, 2014). Marroquin and McCoach (2014) did not report an alpha for the Social Isolation scale due to the exclusion of this subscale in the revised instrument, however for this study the alpha level was found to be .77.

The Cronbach’s alpha for each subscale was acceptable, ranging from .82 to .92 (Marroquin & McCoach, 2014). Even though this scale is in the beginning phase of validation beyond the initial research, the factor structure validation has shown that:

These factors represented a wide range of support mechanisms that the students perceived to be upholding their cultural integrity. The subscales exhibited sufficient internal reliability and consistency, and the eight-factor model indicates that the NAISC is an effective instrument for assessing cultural integrity for Native American College students. (Marroquin & McCoach, 2014, p. 21)

The researcher received permission for the use of this scale (see Appendix E). This study showed acceptable reliability with a Cronbach’s alpha of  $\alpha = .94$  for the total scale and varying reliabilities for each subscale as follows: Faculty Support  $\alpha = .74$ , Social Support  $\alpha = .77$ , Family Support  $\alpha = .84$ , Tribal Support  $\alpha = .90$ , Institutional Support  $\alpha = .70$ ,

Staff Support  $\alpha = .82$ , Cultural Resiliency  $\alpha = .70$ , Cultural Reciprocity  $\alpha = .67$ , and Social Isolation  $\alpha = .77$ .

### **Data Analysis**

Multiple statistical analyses were utilized to answer the research questions posed by the author. The statistical program SPSS 22.0 (IBM Corp, 2013) was used for all the data analysis. Descriptive statistics were obtained about the participants in this sample and multiple statistical analyses were utilized to answer the research questions including employing simple and multiple linear regression analysis. Simple linear regression is used to predict one dependent variable from one independent variable, whereas multiple regression is used to predict one dependent variable from several independent variables and to examine how the variables relate to each other (Howell, 2009). Throughout this study, as is the standard in social science research, the  $p$ -value for each analysis was set at .05 (Howell, 2009; Rencher, 2002).

Finally, the researcher utilized a simple linear regression to determine if sense of belonging was a predictor of intention to persist. The internal consistencies of the scales used in this study were calculated using Cronbach's alpha (Cronbach, 1951) coefficient. These scores were reported above in the discussion of the respective instruments. The reliability of the current measures is assessed through the Cronbach's alpha as internal consistency is used to describe the extent that items in a scale measure the same construct. Varying publications report acceptable scores for Cronbach's alpha range from .70 to .95 (Tavakol & Dennick, 2011). Using this standard, all scales and subscales

except the Institutional Goal Commitment subscale of the IIS-R ( $\alpha = .57$ ) showed acceptable internal consistency.

## CHAPTER IV

### RESULTS

The findings of this study are reported in this chapter. First, preliminary analyses are reported. Then, the results of the analyses for each of the three research questions and sub-questions are presented.

#### Preliminary Analyses

Means and standards deviations were calculated for each of the scales and subscales (see Table 7).

Table 7

Means and Standard Deviations for the Scales and Subscales

Scale	<i>M</i>	<i>SD</i>
Institutional Integration Scale (33 items)	3.71	1.13
<i>Subscale</i>		
Peer group interaction (10 items)	3.81	.75
Interaction with faculty (5 items)	3.75	.86
Faculty concern with student development and teaching (5 items)	3.95	.82
Institutional goal commitment (5 items)	4.62	.46
Academic and intellectual development (8 items)	3.92	.60
North American Indigenous College Students Inventory (48 items)	3.76	.55
<i>Subscale</i>		
Faculty Support (6 items)	3.70	.73



Table 7

(Cont.)

Scale	<i>M</i>	<i>SD</i>
North American Indigenous College Students Inventory (cont.)	3.76	.55
Social Support (6 items)	3.87	.75
Family Support (6 items)	4.33	.69
Tribal Support (7 items)	3.82	.81
Institutional Support (7 items)	3.71	.74
Staff Support (6 items)	3.64	.86
Cultural Resiliency (3 items)	3.44	.99
Cultural Reciprocity (3 items)	4.08	.69
Social Isolation (4 items)	3.20	1.01
Sense of Belonging Scale (3 items)	3.71	1.13
Intention to Persist Variable (2 items)	4.56	.74

### Research Questions

*Research Question 1: To what extent does institutional integration predict sense of belonging for Native American college students?*

A simple linear regression was used to explore if sense of belonging (dependent variable) was predicted by institutional integration (independent variable) of Native American college students. The data were screened for missing values and violations of assumptions related to regression analysis (e.g., linearity, normality). In order to determine if these violations of assumptions existed a lack-of-fit test, histograms, and Q-Q plots were utilized. The lack-of-fit test determines if the pattern of the variables under study is linear and therefore linear modeling is appropriate (Howell, 2012). Data

from the lack-of-fit test led to the rejection of the null hypothesis ( $F_{64,88} = 1.026$ ,  $p = .451$ ) so the assumption of linearity is met. Histograms and Q-Q plots were utilized to determine normality of the data (Howell, 2012). Figure 2 illustrates the histogram for the data analyzed and Figure 3 shows the Q-Q plot run on the same data. The data presented in Figure 2 is relatively bell-shaped and symmetrical demonstrating that the data collected contains few outliers. Figure 3 shows data clustered around a normally distributed line thus illustrating a relatively normal distribution of participants within the sample.

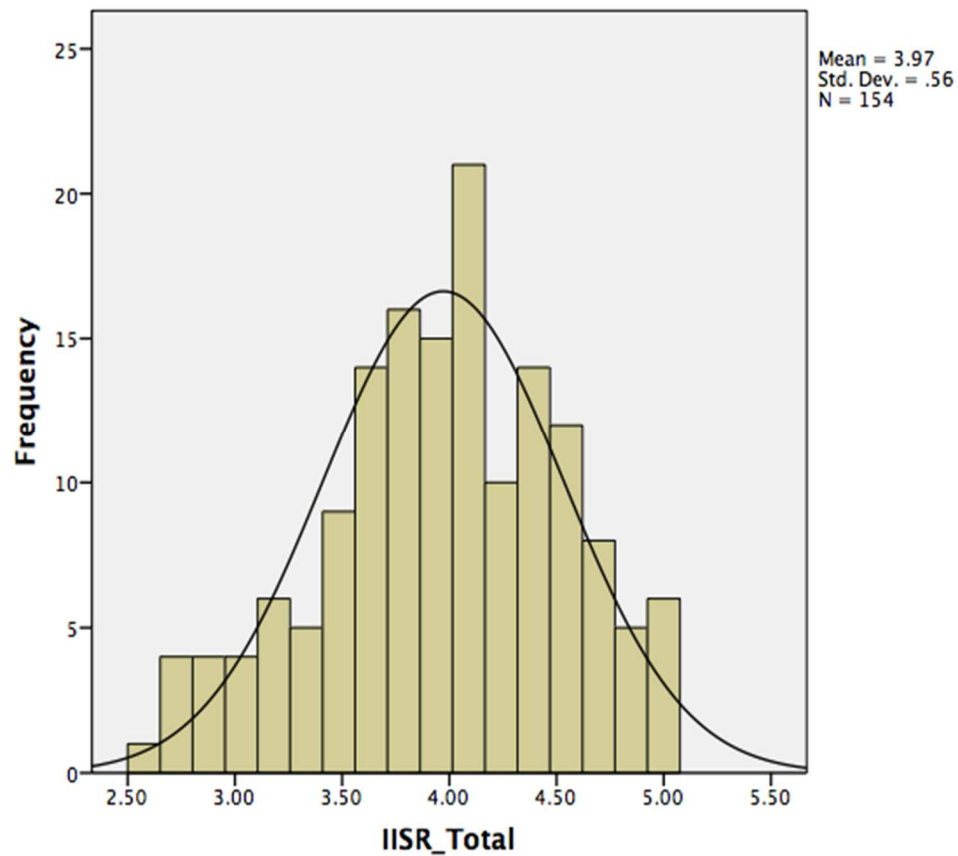


Figure 2. Histogram of Institutional Integration Scale–Revised Total.

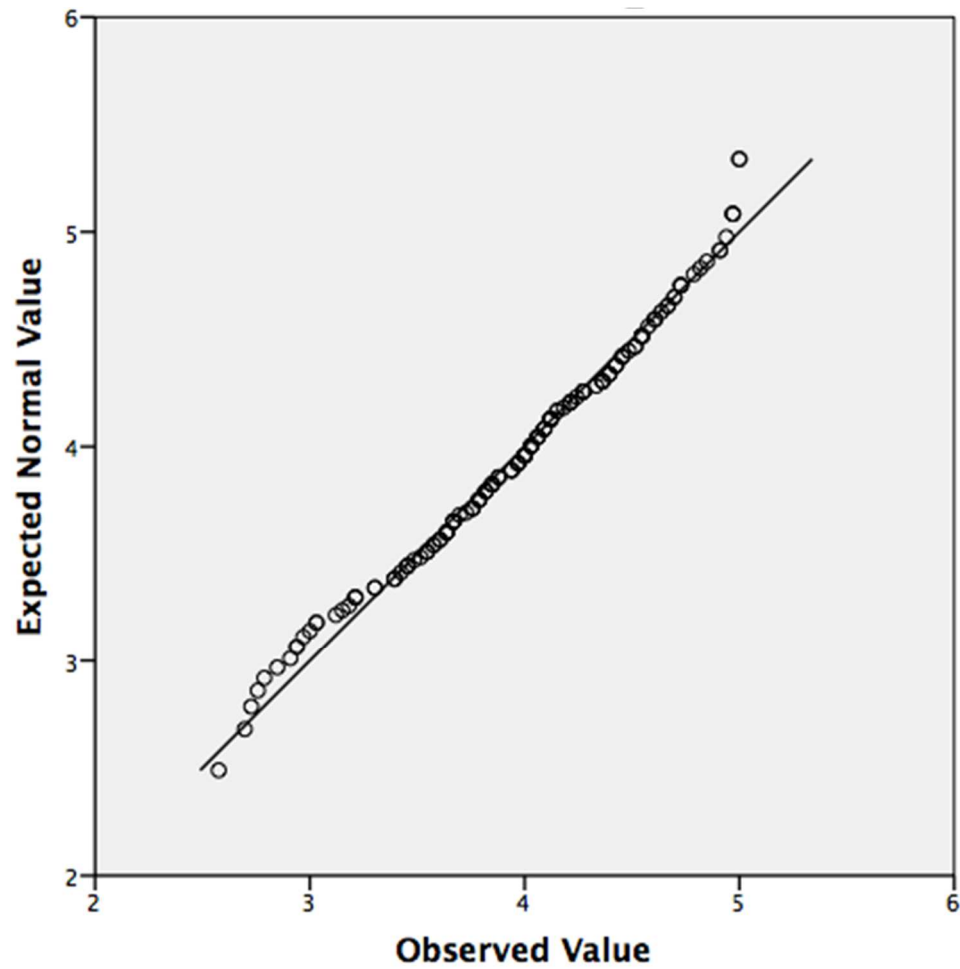


Figure 3. Normal Q-Q Plot of Institutional Integration Scale–Revised Total.

There exists a positive linear relationship between the constructs of Institutional Integration and Sense of Belonging. The scatterplot in Figure 4 shows that there still exists much variation around the regression line, however, as indicated by the  $R^2$  value of .503. Table 8 shows the value of the correlation coefficient ( $R$ ) is .71, indicating a high degree of correlation between Sense of Belonging score and Institutional Integration Scale total score (Dancey & Reidy, 2004). The coefficient of determination ( $R^2$ ) is .50,

indicating that 50% of the variance in Sense of Belonging score can be explained by the variance in the Institutional Integration Scale–Revised total score.

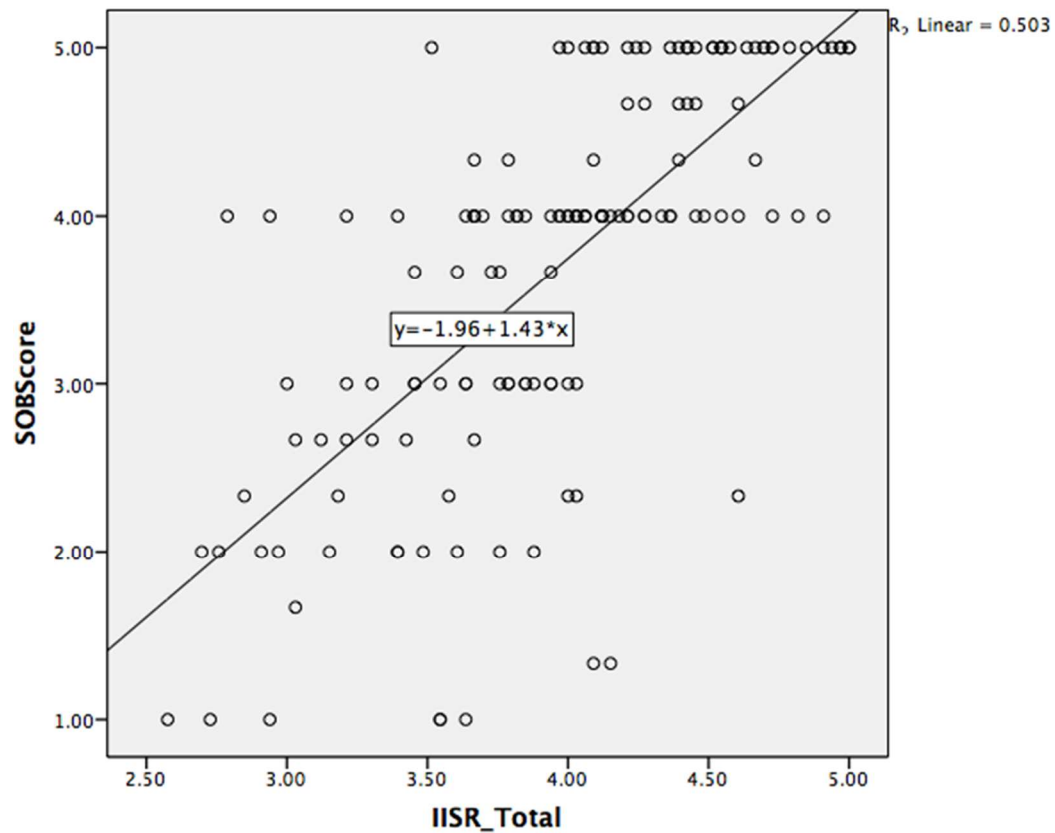


Figure 4. Scatterplot and the Accompanying Regression Line for Institutional Integration and Sense of Belonging.

Table 8

Model Summary of Institutional Integration Variable Predicting Sense of Belonging

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adjusted R</i> <sup>2</sup>	Standard Error of Estimate
1	.71	.50	.50	.80

The correlation coefficient ( $R$ ) is also equivalent to the effect size (Murphy, Myers, & Wolach, 2014). Kelley and Preacher (2012) provide a succinct explanation of what an effect size is: “Effect size is defined as a quantitative reflection of the magnitude of some phenomenon that is used for the purpose of addressing a question of interest” (p. 140). Cohen (2013) provided rules of thumb for interpreting these effect sizes, suggesting that an  $r$  of  $|.1|$  represents a ‘small’ effect size,  $|.3|$  represents a ‘medium’ effect size, and  $|.5|$  represents a ‘large’ effect size. Therefore, with an effect size of .71 this instrument has practical as well as statistical significance.

The test statistic  $F_{1,152} = 153.86, p < .000, \alpha = .05$  indicates that the Institutional Integration Scale-Revised is a significant predictor of Sense of Belonging. The regression equation is:  $SOBS = -1.96 + 1.43IIS\_Total$ , thus illustrating that with an increase in the score on institutional integration of one there will be an increase of 1.43 on their sense of belonging score. The analysis of the regression results indicates that the slope of the parameter is significantly different from zero ( $p > .001$ ). See Table 9.

Table 9

Regression Analysis Summary for Institutional Integration Variable Predicting Sense of Belonging

Model	$B$	$SE$	$\beta$	$t$	$p$
Constant	-1.96	.46	—	-4.24	.000
IIS-R Total	1.43	.12	.71	12.40	.000

*Research Question 1a: Of the items examined, what is the most significant predictor of sense of belonging?*

A multiple linear regression was used to determine which of the factors that made up the IIS-R studied was the strongest predictor of sense of belonging for Native American college students. These factors included peer group interaction, interaction with faculty, faculty concern with student development and teaching, institutional goal commitment, and academic and intellectual development. Since assumptions were met for the total scale from research question 1, it follows that assumptions have been met for the subscales. The five subscale scores (predictors) were simultaneously entered into the model. The means, standard deviations, and intercorrelations for scores on Institutional Integration Scale Revised and Subscales are displayed in Table 10.

Table 10

Intercorrelation and Coefficient Alphas for Scores of Institutional Integration Scale Revised Subscales

Scale	<i>M</i>	<i>SD</i>	$\rho^{xx}$	Measure				
				1	2	3	4	5
Institutional Integration Scale	3.71	1.13	(.94)					
1. Peer group interaction	3.81	.75		(.91)				
2. Interaction with faculty	3.75	.86		.56	(.90)			
3. Academic and intellectual development	3.92	.60		.59	.55	(.78)		

Table 10

(Cont.)

Scale	<i>M</i>	<i>SD</i>	$\rho^{xx}$	Measure				
				1	2	3	4	5
4. Faculty concern with student development and teaching	3.95	.82		.53	.71	.65	(.91)	
5. Institutional goal commitment	4.62	.46		.32	.31	.49	.47	(.57)

*Note.* Coefficient alphas presenting in parentheses along the diagonal. All coefficients are significant at  $p < .01$ .

Together these predictors accounted for 61% of the variance in sense of belonging score ( $R^2 = .61$ ; see Table 11). The analysis showed only one of the five subscale items, peer-group interaction, having significant impact on sense of belonging among Native American college students. Peer-group interaction was the strongest predictor ( $\beta = .69$ ; see Table 11).

Table 11

Regression Analysis Summary for Institutional Integration Scale Revised (Institutional Integration Variable) Predicting Sense of Belonging

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>T</i>	<i>p</i>
Constant	-1.015	.61	-	-1.685	.094
Peer Group Interaction	1.035	.10	.69	10.16	.000
Interactions with Faculty	.110	.10	.08	1.09	.277

Table 11

(Cont.)

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>T</i>	<i>p</i>
Academic and Intellectual Development	-.056	.14	-.03	-.397	.692
Faculty Concern with Student Development and Teaching	.138	.12	.10	1.200	.232
Institutional Goal Commitment	.009	.15	.004	.062	.i 1

*Research Question 2: To what extent does cultural integrity contribute to sense of belonging for Native American college students?*

A simple linear regression was used to explore if sense of belonging (dependent variable) could be predicted by cultural integrity (independent variable) of Native American college students. The data were screened for missing values and violations of assumptions related to regression analysis (e.g., linearity, normality). In order to determine if these violations of assumptions existed a lack of fit test, histograms, and Q-Q plots were utilized. The lack-of-fit test determines if the pattern of the variables under study is linear and therefore linear modeling is appropriate (Howell, 2012). Data from the lack-of-fit test led to the rejection of the null hypothesis ( $F_{84,68} = .975, p = .548$ ) so the assumption of linearity is met. Histograms and Q-Q plots were utilized to determine normality of the data (Howell, 2012).

Figure 5 illustrates the histogram for the data analyzed and Figure 6 shows the Q-Q plot run on the same data. The data presented in Figure 5 is relatively bell-shaped



and symmetrical, demonstrating that the data collected contains few outliers. Figure 6 shows data clustered around a normally distributed line, thus illustrating a relatively normal distribution of participants within the sample.

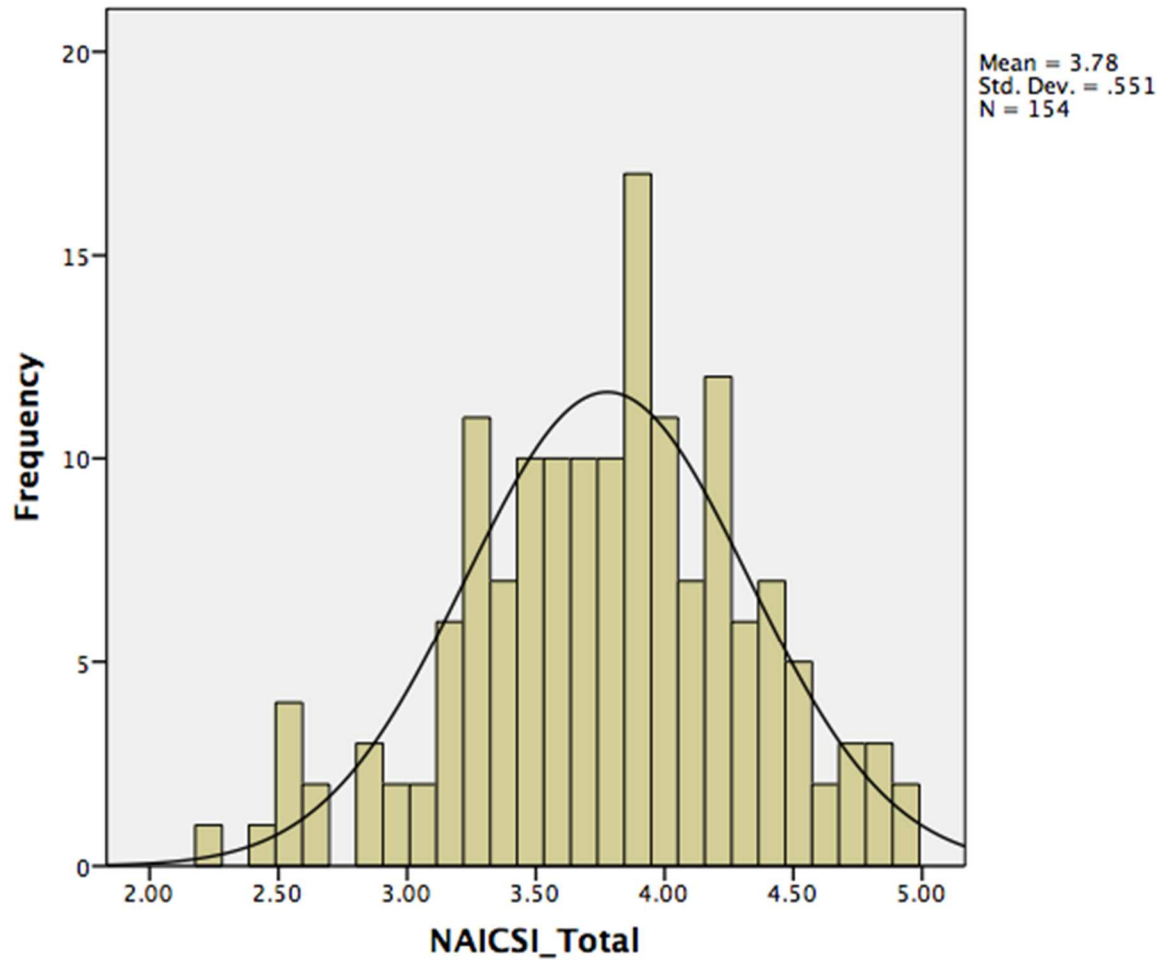


Figure 5. Histogram of Cultural Integrity Variable.

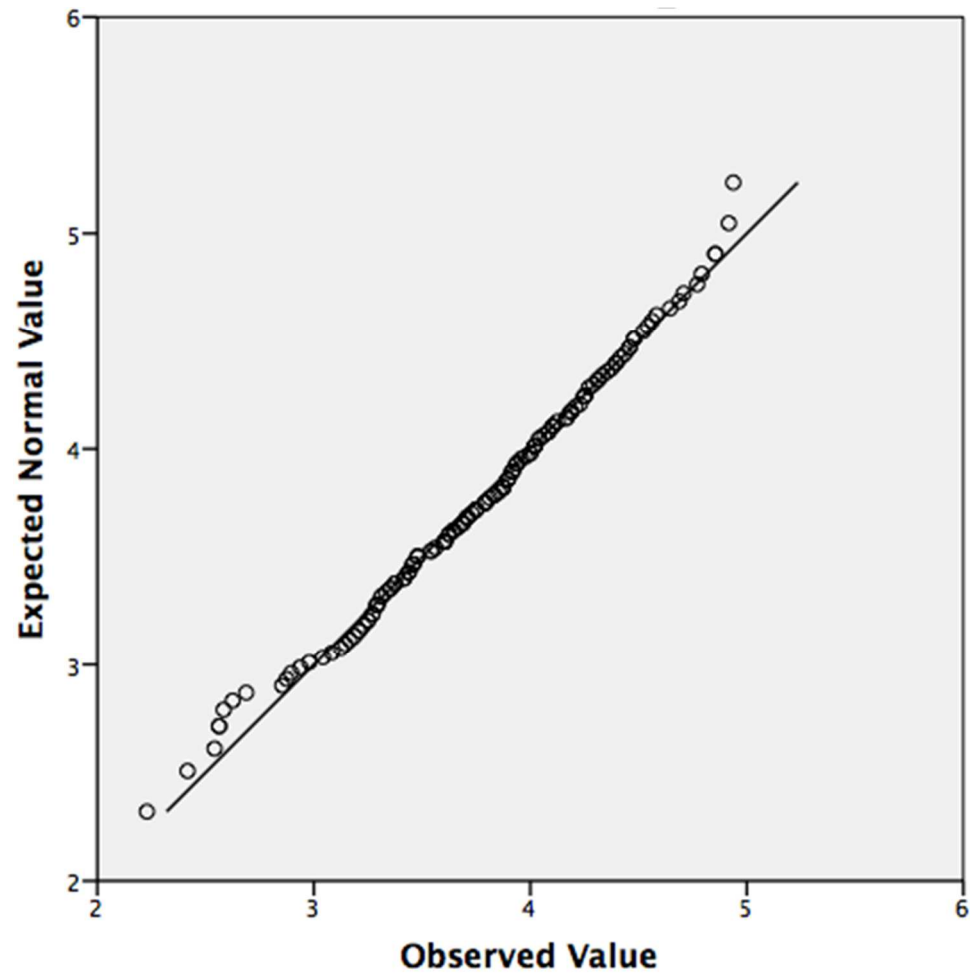


Figure 6. Q-Q Plot of Cultural Integrity Variable.

There exists a positive linear relationship between the constructs of cultural integrity and sense of belonging. The scatterplot in Figure 7 shows that there still exists much variation around the regression line, however, as indicated by the  $R^2$  value of .470. The value of the correlation coefficient ( $R$ ) is .69, indicating a high degree of correlation between sense of belonging score and cultural integrity total score (Dancey & Reidy, 2004). The coefficient of determination ( $R^2$ ) is .47, indicating that 47% of the variance in sense of belonging score can be explained by the variance of the NACSI total score (see

Table 12). Therefore, with a moderate effect size of .47 this instrument has some practical as well as statistical significance. Table 13 provides the results of the linear regression analysis and information for model construction.

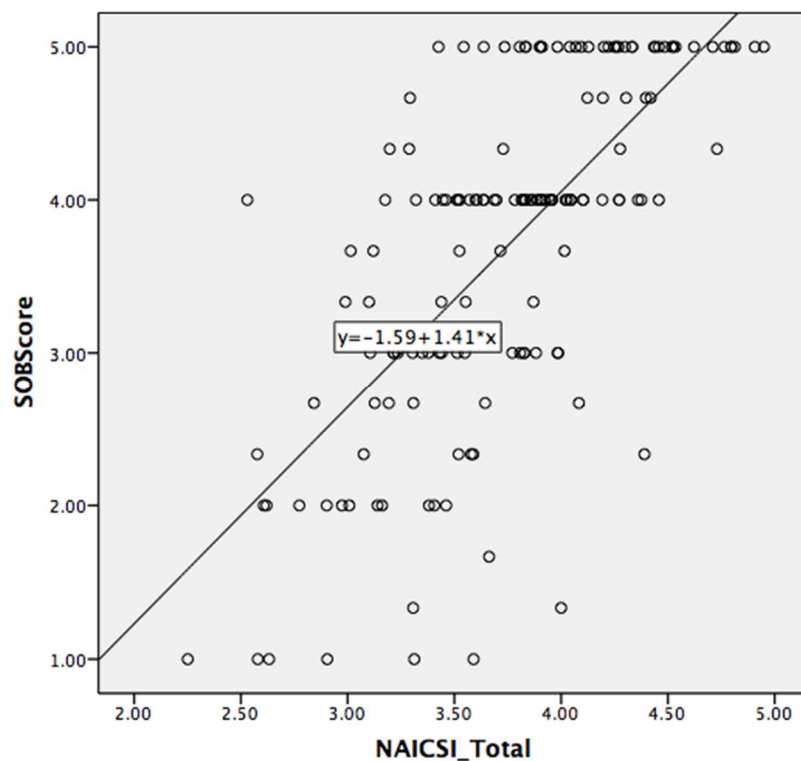


Figure 7. Scatterplot and the Accompanying Regression Line for Cultural Integrity Predicting Intention to Persist.

Table 12

Model Summary of Cultural Integrity Variable Predicting Sense of Belonging

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adjusted R</i> <sup>2</sup>	Standard Error of Estimate
1	.68	.47	.57	.82

Table 13

## Regression Analysis Summary for Cultural Integrity Predicting Sense of Belonging

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Constant	-1.60	.46	-	-3.46	.001
NAICSI_Total	1.41	.12	.69	11.61	.000

The regression equation is:  $SOBS = -1.60 + 1.41 \text{ NAICSI\_Total}$ , thus illustrating that with an increase in one on the NAICSI\_Total leads to an increase of 1.41 on their sense of belonging score. The analysis of the regression results indicates that cultural integrity significantly predicts sense of belonging ( $p > .000$ ).

*Research Question 2a: Of the items examined, what is the most significant predictor of sense of belonging?*

A multiple linear regression was used to determine which of the factors that make up the NAICSI studied was the strongest predictor of sense of belonging for Native American college students. These factors included faculty support, staff support, social support, family support, tribal community support, institutional support, cultural reciprocity, cultural resiliency, and social isolation. The means, standard deviations, and intercorrelations for scores on the NAICSI and Subscales are presented in Table 14. Since assumptions were met for the total scale from research question two, it follows that assumptions have been met for the subscales.

Table 14

Means, Standard Deviations, and Intercorrelation Matrix of North American Indigenous College Students Inventory (Cultural Integrity Variable)

Scale	<i>M</i>	<i>SD</i>	$\rho^{xx}$	Measure								
North American Indigenous College Students Inventory	3.76	.55	(.93)	1	2	3	4	5	6	7	8	9
1. Faculty Support	3.70	.73		(.74)								
2. Social Support	3.87	.75		.56*	(.77)							
3. Family Support	4.33	.69		.24*	.46*	(.84)						
4. Tribal Support	3.82	.81		.37*	.43*	.56*	(.90)					
5. Institutional Support	3.71	.74		.51*	.53*	.32*	.36*	(.70)				
6. Staff Support	3.64	.86		.73*	.59*	.28*	.43*	.56*	(.82)			
7. Cultural Resiliency	3.44	.99		.40*	.26*	.16**	.11	.52*	.27*	(.70)		
8. Cultural Reciprocity	4.08	.69		.49*	.50*	.27*	.35*	.32*	.55*	.01*	(.67)	
9. Social Isolation	3.20	1.01		.42*	.58*	.27*	.19**	.49*	.38*	.48*	.27*	(.77)

*Note.* Coefficient alphas are presented in parentheses along the diagonal.

\* Coefficients are significant at  $p < .01$ .

\*\* Coefficients are significant at  $p < .05$ .

The eight subscale scores (predictors) were simultaneously entered into the model. Together these predictors accounted for 60% of the variance in sense of belonging score. The data showed three of the eight subscale items as having significant impact on sense of belonging among Native American college students. Social support was the strongest predictor ( $\beta = .47$ ), then Social Isolation ( $\beta = .23$ ), and finally Staff Support ( $\beta = .19$ ; see Table 15).

Table 15

Regression Analysis Summary for North American Indigenous College Students  
Inventory (Cultural Integrity Variable) Predicting Sense of Belonging

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Constant	-0.64	0.50	-	-1.29	0.20
Faculty Support	0.11	0.13	0.07	0.82	0.42
Social Support	0.71	0.13	0.47	5.63	0.00
Family Support	-0.05	0.11	-0.03	-0.42	0.68
Tribal Support	0.06	0.10	0.04	0.59	0.56
Institutional Support	0.08	0.12	0.05	0.67	0.50
Staff Support	0.25	0.12	0.19	2.12	0.04
Cultural Resiliency	-0.12	0.08	-0.10	-1.43	0.15
Cultural Reciprocity	-0.10	0.11	-0.06	-0.92	0.36
Social Isolation	0.26	0.08	0.23	3.18	0.00

*Research Question 3: Does having a higher sense of belonging predict intention to persist for Native American students?*

A simple linear regression was used to explore if having a higher sense of belonging (independent variable) could predict intention to persist (ITP) (dependent variable) of Native American college students. The data were screened for missing values and violations of assumptions related to regression analysis (e.g., linearity, normality). In order to determine if these violations of assumptions existed a lack of fit test, histograms, and Q-Q plots were utilized. The lack-of-fit test determines if the pattern of the variables under study is linear and therefore linear modeling is appropriate (Cohen et al., 2013). Data from the lack-of-fit test led to the rejection of the null hypothesis ( $F_{84,68} = 1.065, p = .394$ ) so the assumption of linearity is met. Histograms and Q-Q plots were utilized to determine normality of the data (Howell, 2012). Figure 8 illustrates the histogram for the data analyzed and Figure 9 shows the Q-Q plot run on the same data

The data presented in Figure 8 is relatively bell-shaped and negatively skewed, demonstrating that the data collected contains outliers; however, since this variable was computed from only two items the mean was on the high end of the scale. Figure 9 reinforces the data from the histogram.

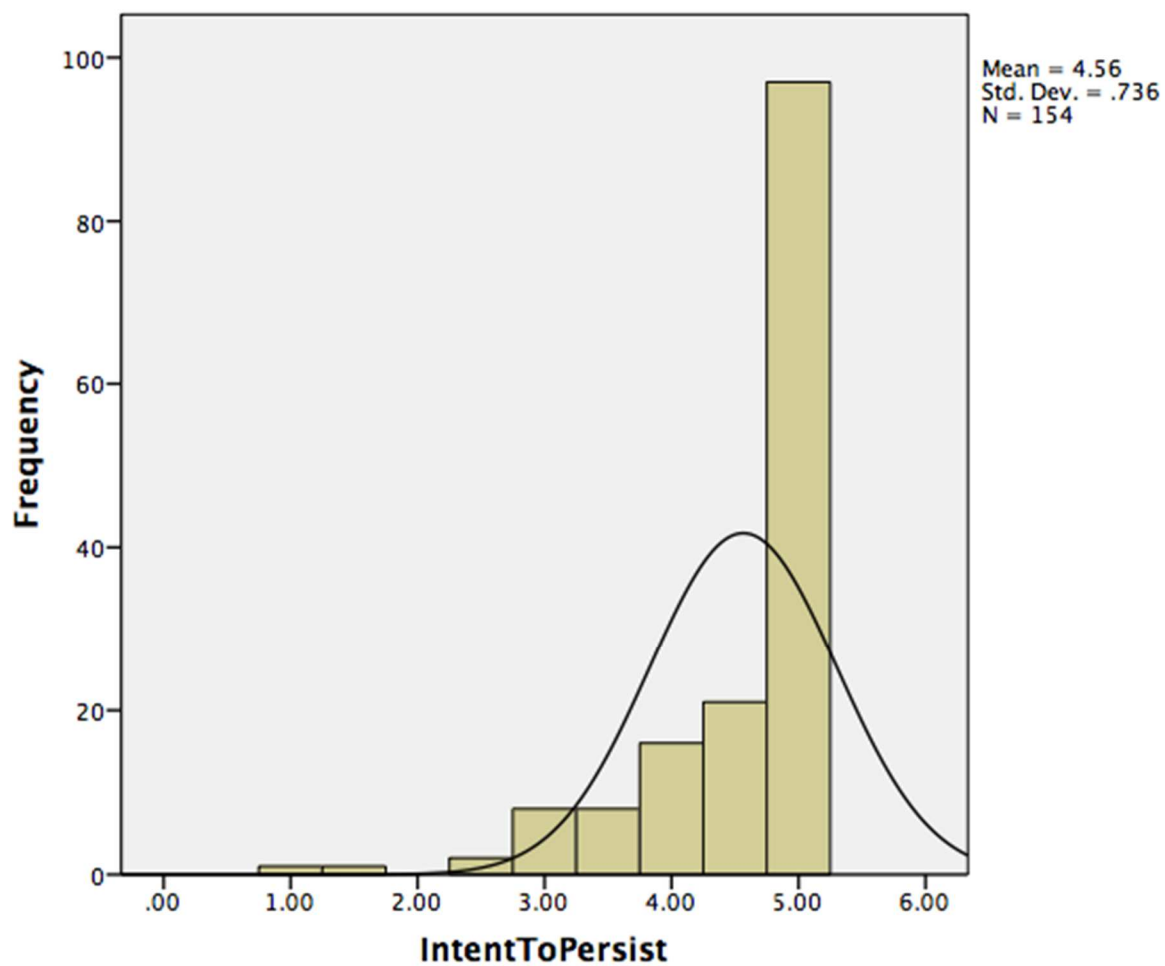


Figure 8. Histogram of Intent to Persist Variable.



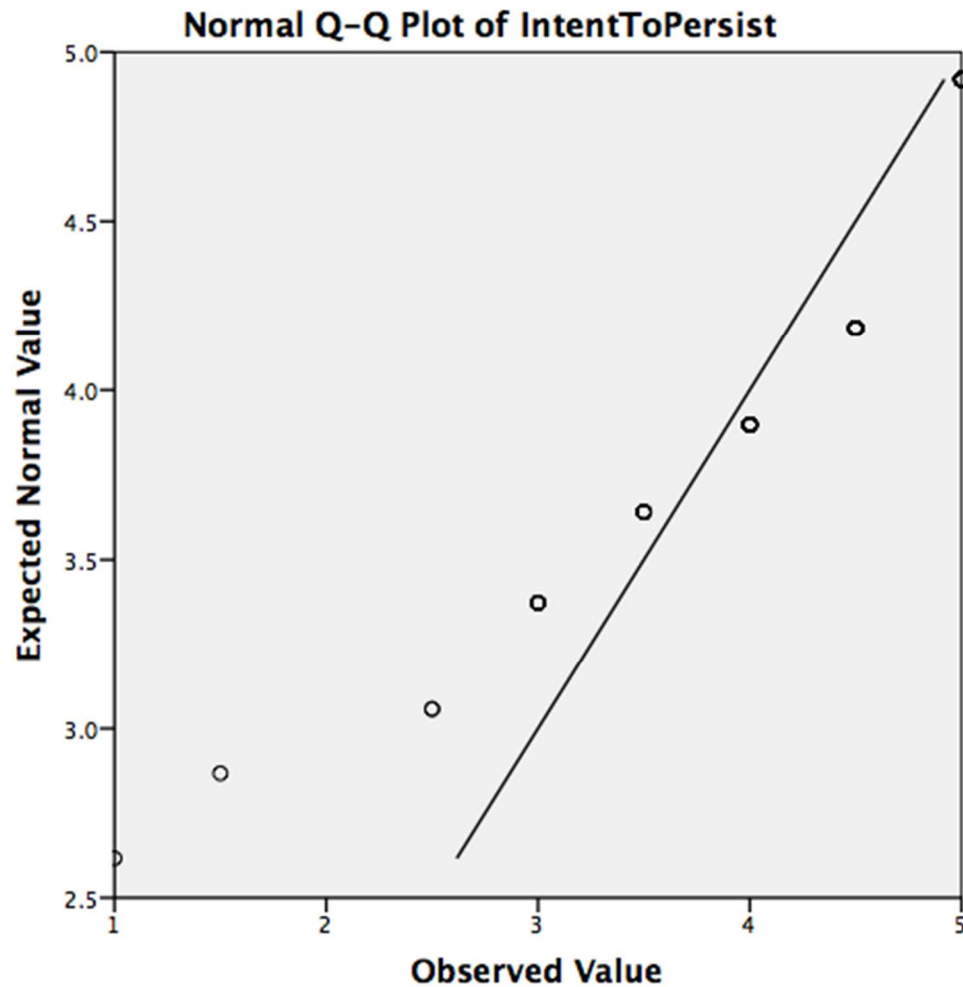


Figure 9. Q-Q Plot of Intent to Persist Variable.

Though there is dispersion of the data and a small slope, there is a slight positive linear relationship between the two constructs of sense of belonging and intention to persist. The scatterplot in Figure 10 shows that there still exists considerable variation around the regression line, however, as indicated by the  $R^2$  value of .128. The value of the correlation coefficient ( $R$ ) is .36, indicating a weak to moderate correlation between intention to persist and sense of belonging (Dancey & Reidy, 2004). The coefficient of determination ( $R^2$ ) is .13, indicating that 13% of the variance in intention to persist can be

explained by the variance of the sense of belonging score. Therefore, with a small effect size of .13 this instrument has some statistical significance.

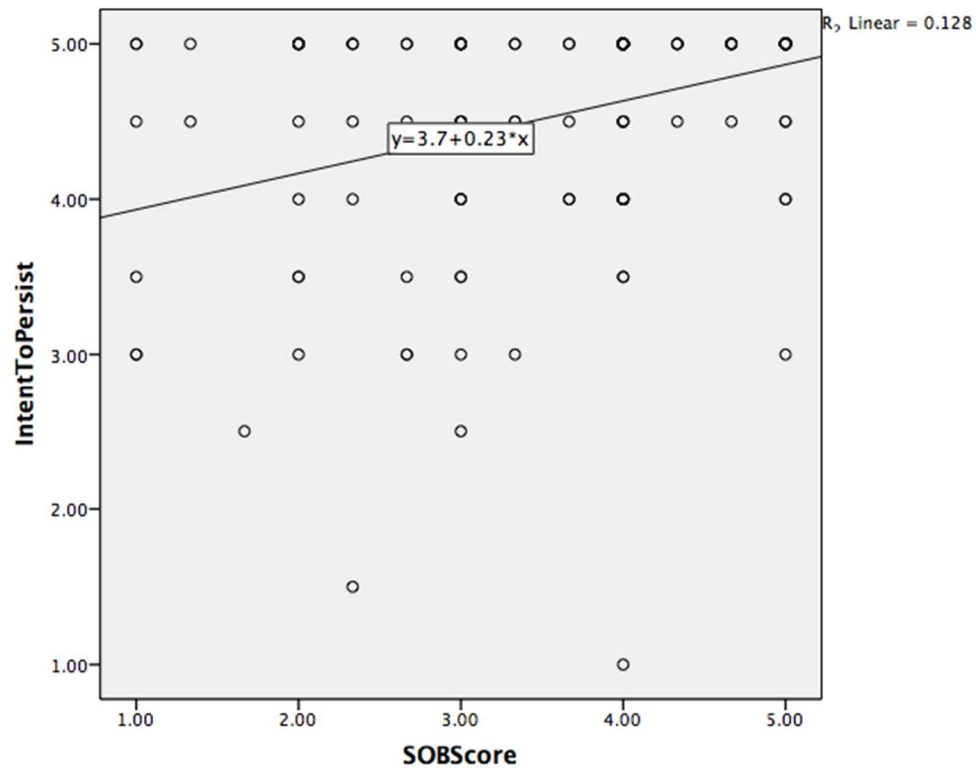


Figure 10. Scatterplot and Accompanying Regression Line for Sense of Belonging Predicting Intention to Persist.

Table 16 provides the results of the linear regression analysis and information for model construction. The regression equation is:  $\text{Intent to Persist} = 3.70 + .23 \text{ SOBScore}$ , thus illustrating that an increase of one on the sense of belonging scale leads to an increase of .23 on their intent to persist score. The analysis of the regression results indicates that the slope of the parameter is significantly different from zero ( $p < .001$ ).

Table 16

Model Summary for Sense of Belonging as a Predictor of Intention to Persist

Model	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Constant	3.70	.19	-	19.28	.000
SOBScore	.23	.05	.36	4.71	.000

## **CHAPTER V**

### **SUMMARY AND DISCUSSION**

#### **Introduction**

The purpose of this study was to explore the effects of institutional integration and cultural integrity on sense of belonging and the effect of sense of belonging on intention to persist for Native American college students at Non-Tribal Colleges and Universities. Much of the research on Native American college students has been either qualitative with a small number of participants or secondary data analysis from large national datasets (e.g., National Study of Student Engagement, Multi-institutional Study of Leadership, Integrated Postsecondary Education Data System) looking only at the subset of responses from Native American students.

Given the lack of primary, quantitative research related to institutional integration, cultural integrity, and sense of belonging related to Native American college students, this study sought to fill that gap. The design of this study was grounded in literature related to the constructs listed above. Integration within the institutional environment has been cited as a significant influential factor for college students' development (Hausmann et al., 2007; Hurtado & Carter, 1997; Nora & Cabrera, 1996). Further, research specifically asserts that, for Native American students, factors that contribute to their persistence are maintaining their cultural identity throughout their educational experience, inclusion of family/kinship relationships, and having a supportive

institutional environment, thus making them more likely to succeed academically (Guillory & Wolverton, 2008; Horse, 2005; Huffman, 2010; Larimore & McClellan, 2005; Peltier et al., 1999; Tierney, 1999). Strayhorn (2008a) helped to distinguish sense of belonging, consisting of both cognitive and affective domains, as an individual construct separate and apart from institutional integration measuring students' connectedness to a campus environment. Given the focus of each of these factors on student success in higher education and in many cases the need for students to connect or "fit" their institution, these constructs can help determine whether a student will stay at a respective institution (intent to persist).

### **Discussion**

The findings of this study suggest that Institutional Integration and Cultural Integrity contribute to Native American students' sense of belonging. Furthermore, the data suggest that sense of belonging is a significant predictor of intention to persist for Native American college students; however, it explained only 12% of the variance in intention to persist, indicating there are other variables beyond sense of belonging that contribute to intention to persist. This discussion will begin with describing the two dependent variables, Sense of Belonging and Intention to Persist, and will follow with a discussion of each research question.

#### **Sense of Belonging Construct**

Sense of belonging was measured by the Sense of Belonging Scale (Bollen & Hoyle, 1990) consisting of three items asking participants to rate their overall perceived connection with their campus environment. The mean for the sense of belonging scale

was 3.71 ( $SD = 1.13$ ). The calculated mean indicates that participants moderately agreed with the items being presented to them, indicating that they somewhat felt connected to their overall campus environment. Although this is the case, the wide standard deviation suggests that the scores could move by one entire satisfaction level in either direction to disagree or strongly agree for any given participant. This indicates a wide range of variation in how these Native American students feel they belong within their institution.

Sense of belonging is a predictor of intention to persist; however, it explains only a small percentage of the variance ( $R^2 = .128$ ). This construct is still important to study especially for Native American students within higher education. Even though the sense of belonging construct only explains a small portion of these students' intention to persist, we should continue to make strides for increasing sense of belonging. Negative consequences of failing to achieve sense of belonging, such as lower GPA, lower academic self-concept (Freeman et al., 2007; Hurtado & Carter, 1997), lower academic performance (Freeman et al., 2007), mental health issues (Baumeister & Leary, 1995), physical health issues (Baumeister & Leary, 1995; Maslow, 1943, 1962, 1968), behavioral issues (Baumeister & Leary, 1995; Maslow, 1943, 1962, 1968), decreased institutional and goal commitment (Berger & Milem, 1999), and lack of involvement (Berger & Milem, 1999; Block, 2011) can have a detrimental effect for Native American students. Professionals in higher education have an ethical and moral obligation to ensure students feel welcomed and an integral part of the institutional environment. The main purpose of Student Affairs professionals is to support the institutional mission through being able to "serve students and foster their learning and development" (Council

for the Advancement of Academic Standards [CAS], 2012, p. 1). There are significant barriers to development if students lack a sense of belonging or "fit" into the institutional environment (i.e., are accepted for who they are culturally). Furthermore, this perception by students can make it difficult for professionals in higher education to help encourage and guide them through the development process.

### **Intention to Persist**

Two items from the institutional goal commitment subscale of the IIS-R were computed to assess the participants' intention to persist. The mean for intention to persist was high ( $M = 4.56$ ;  $SD = .74$ ) with a small range of variability within the scale, thus we can interpret that these Native American students are fairly certain that they will persist. These findings indicate that student-self-report of intention to persist could be overly optimistic and may not actually reflect behavior given the high mean and low standard deviation. The relatively small correlation ( $R = .36$ ) between sense of belonging and intention to persist suggests there are many contributors to intention persist that this study did not capture. Given the complexities of today's higher education environment, many students come to college with an ever-growing multitude of issues, concerns, and characteristics that influence their behavior and experiences within the institutional environment (Renn & Reason, 2013). Given this complexity it is apparent that there are numerous issues influencing intention to persist such as students' mental health (Buchanan, 2012; Snyder & Dillow, 2012; Zivin, Eisenberg, Gollust, & Golberstein, 2009), finances (E. F. Brown et al., 2010), engagement (Kuh, 2006; Pascarella & Terenzini, 2005; Terenzini, Pascarella, & Blimling, 1996), academic success (Cherry &

Coleman, 2010; Furr & Elling, 2002; Pan et al., 2008), and academic preparation (Adelman, 2006; Astin & Oseguera, 2005; Reason et al., 2006). In sum, the data from this study illustrate that sense of belonging is a predictor of intention to persist even though it explains only a small percentage of the variance. As these data suggest, there is a significant portion in the variance in intention to persist that remains unexplained.

### **Institutional Integration and Sense of Belonging**

Research question one sought to explore whether institutional integration contributes to sense of belonging for Native American college students. The hypothesis was that institutional integration would contribute significantly to sense of belonging. Findings from this study support the hypothesis that institutional integration is a significant predictor of sense of belonging for Native American college students. The results show that 50% ( $R^2 = .50$ ) of the variance in sense of belonging is explained by the institutional integration total score.

Research question one (a) was a follow-up to research question one to find out which factor in the Institutional Integration Scale-Revised (IIS-R) was the most significant predictor of sense of belonging. Based on a multiple regression analysis, the results showed that peer group interactions (PGI) was the only statistically significant factor of the institutional integration scale, accounting for 69% ( $\beta = .69$ ) of the variance explained by institutional integration, in sense of belonging score.

For this group of students the data suggest that a main predictor of sense of belonging, as measured by the IIS-R, is their relationship with their peers and includes having made friends, finding it easy to meet and make friends, being happy with living



arrangements, having friends who will listen to and help with personal problems, and having friends with similar values and attitudes. This is consistent with the literature that shows interactions with peers in both social and academic setting increases the likelihood for enhancing sense of belonging, promoting student development, and academic success (Astin, 1999; Chickering & Reisser, 1993; Demcho, 2011; Freeman et al., 2007; Hausmann et al., 2007; Hurtado & Carter, 1997; Locks et al., 2008; Maestas et al., 2007).

### **Cultural Integrity and Sense of Belonging**

Research question two sought to explore whether cultural integrity (as measured by the NAICSI) contributes to sense of belonging for Native American college students. The researcher's hypothesis was that cultural integrity would contribute significantly to sense of belonging. Findings from this study support the hypothesis that cultural integrity is a significant predictor of sense of belonging for Native American college students. The results show that 47% ( $R^2 = .47$ ) of the variance in sense of belonging is explained by the cultural integrity total score.

Research question two (a) was a follow-up to research question two to find out which factors of cultural integrity (as measured by the NAICSI) were the most significant predictors. Based on a multiple regression analysis, the results showed that social support, staff support, and social isolation were statistically significant. The subscale of social support accounted for 48% ( $\beta = .48$ ) of the variance explained by cultural integrity in sense of belonging score and was significant ( $p < .001$ ). The next factor that contributed significantly was the social isolation subscale accounting for 23% ( $\beta = .23$ ) of the variance explained by cultural integrity in sense of belonging score and was

significant ( $p = .002$ ). Finally, the staff support subscale contributed significantly, accounting for 19% ( $\beta = .19$ ) of the variance explained by cultural integrity in sense of belonging score and was significant ( $p < .05$ ).

First, for this group of students the data suggest that their relationship with their peers is a main factor in establishing sense of belonging. As measured by the NAICSI this includes such things as peers showing respect for culture, having Native friends, feeling a part of the campus community, having friends from different cultures, and seeing friends as family on campus. These results are consistent with previous research that shows that personal connections, recognition within a particular group of peers, and support from their friends/peers encourages development within the collegiate environment and ultimately success (L. L. Brown & Robinson Kurpius, 1997; Chickering & Reisser, 1993; Marroquin & McCoach, 2014). Delving further into the social support, the items in this instrument illustrate the centrality of Native American culture as an important aspect of social support. Previous research has highlighted the importance of respect and inclusion of culture for Native American students on campus (Garrod & Larimore, 1997; Guillory & Wolverton, 2008). Most often the culturally relevant support came in the form of Native American student centers, Native American affinity organizations, enclaves for Native American students, Native American studies programs, and Native American Living Learning centers that were cited as being able to help combat feelings of isolation, promote socialization, and encourage their feelings of being part of the campus community (Garrod & Larimore, 1997; Guillory & Wolverton, 2008).

Second, social isolation was found to be a significant factor in predicting sense of belonging for this group of students. It is important to note that the wording and the scoring of these four items indicate a *lack* of social isolation. Therefore, this subscale as scored might more properly be renamed “Lack of Social Isolation.” Items in this scale include “When I first started college, I felt socially isolated” (reverse coded), “I still feel socially isolated on campus” (reverse coded), “I find it hard to make friends on campus” (reverse coded), and “I can speak my Native language/dialect with other students on campus” (not reverse coded). This factor also significantly predicted sense of belonging, accounting for 23% ( $\beta = .23$ ) of the variance explained by cultural integrity in the sense of belonging score. These results are consistent with previous research that shows Native American students are able to “break out of their isolation . . . and learn how to navigate within the higher education system” (Marroquin & McCoach, 2014, p. 5) through finding support systems within their peer groups and other staff, while at the same time being able to maintain their own cultural identity. Further identifying the importance of a lack of social isolation, Huffman (2001) found that Native American students who were socially isolated on campus were discouraged and ultimately left college due to this isolation.

Third, for this group of students, staff support was significant in predicting sense of belonging. The items in this factor include “My academic advisor helps me to understand the long term benefits of completing college,” “I feel connected to my academic advisor,” “There is a staff person who is Native American/Alaskan Native that is supportive of my academic success,” “There is staff (financial aid, student services) on

my campus who is supportive of my culture,” “I feel connected to the staff on my campus,” and “There has been a staff member that has helped me to access various campus resources.” These results are consistent with previous research showing the importance of supportive staff (Chickering & Reisser, 1993; Schlossberg, Lynch, & Chickering, 1989) and more specifically for Native American students having supportive Non-Native staff members on campus but also having Native American staff members as employees of the institutions was significant (Falk & Aitken, 1984; Harrington & Hunt, 2010; Lundberg, 2007). The majority of the literature that has been cited as having impact on Native American students has focused mainly on Native American faculty (Hornett, 1989; Tippeconnic Fox, 2005; Wells Jr., 1997). When Native American staff has been included, they have not been the focus of the study and findings related to them have been “lumped in” with those about faculty (L. L. Brown & Robinson Kurpius, 1997; Falk & Aitken, 1984; Terenzini et al., 1996).

### **Comparison of IIS-R and NAICSI**

The findings of research question one and research question two are very consistent with one another. In both cases, relationships with peers seem to be the most important contributor to these students’ sense of belonging. However, the findings from research question two provide more information about sources of Native American students’ sense of belonging. Furthermore, even the superficially similar results relating to peer relationships reveal subtle but important differences upon closer examination.

Though each of the scales on the surface seems to measure similar constructs of students’ campus experiences, the results of this study suggest that NAICSI is exploring

additional factors that are not addressed in the IIS-R. The NAICSI was constructed with a cultural lens specifically for Native American student experiences within the campus environment. On the other hand, the IIS-R is more general and does not take into account the students' culture and interactions in the campus environment that support or inhibit their cultural identity.

For instance, when comparing the IIS-R peer-group interactions and the NAICSI social support subscales (both of which were significant predictors of sense of belonging), there is a marked difference in the question about on-campus involvement. The IIS-R item asks, "I am satisfied with the opportunities to participate in organized extra-curricular activities at my campus," whereas the NAICSI asks "I participate in student groups on campus." The subtle yet important difference is the assumption of behavior in the item of the NAICSI compared to the students' perception of satisfaction in the IIS-R item.

Furthermore, the items addressing friendships with peers in the IIS-R taps into their satisfaction with these relationships and the positive influence they have had on the student. In contrast, the NAICSI items specifically ask about Native American friends, as well as others from different cultures, how well the students feels a part of the campus community, and if the friends on campus feel like family to the student. This distinction is important to note given the relationship-oriented, communal, and cooperative nature of Native American culture (Yellow Bird, 2001; Yellowbird & Snipp, 1994), as well as the value of the community orientation (familial orientation) that is inherently connected to individual. The NAICSI is a specialized instrument created by an Indigenous researcher

specifically for measuring cultural integrity of Native American college students. This study supports the need for having an instrument created from a Native American perspective to assess Native American students' attitudes regarding factors within their collegiate experience affecting their cultural integrity (Marroquin & McCoach, 2014). As this instrument was "based on the research of previous and current Indigenous scholars" (Marroquin & McCoach, 2014, p. 3), the researcher would go further in asserting that the difference in how the two scales (IIS-R and NAICSI) utilize the word peer/friend is not synonymous due to the fact that Native American students could interpret peers to mean acquaintances. Thus, juxtaposing the question from the IIS-R "I have developed close personal relationships with other students" would not be fundamentally the same as this question from the NAICSI, "I see my friends on campus as family."

The other two significant factors contributing to sense of belonging in the NAICSI were social isolation and staff support. The IIS-R does not contain subscales that would correspond to these factors. For instance, although faculty support is addressed by the IIS-R, staff support is not. The NAICSI parses faculty support and staff support into two separate factors, which allows the importance of staff support to come through. Therefore, when looking at sense of belonging for non-dominant student cultures it may be important to look at factors that are not typically measured in many of the standard instruments utilized within higher education, such as the IIS-R and NSSE (Kinzie, Gonyea, Shoup, & Kuh, 2008). The data from this study show that looking at cultural integrity adds important information to our understanding of sense of belonging

for Native American college students than if we solely looked at sense of belonging from an integration perspective. This reinforces the importance of having theory and instrumentation grounded in culturally relevant research. If certain constructs are not present in the instrumentation (such as staff support in this case), researchers will not be able to detect their importance.

### **Sense of Belonging and Intention to Persist**

Research question three sought to explore if sense of belonging predicts intention to persist. The researcher's hypothesis was that sense of belonging would significantly predict intention to persist and that students with a higher sense of belonging would score higher on intention to persist. Findings from this study support the hypothesis that a higher sense of belonging is moderately correlated with higher intention to persist ( $r = .357, p < .01$ ) for Native American college students. However, the regression analysis showed that sense of belonging accounted for only 13% ( $R^2 = .128$ ) of the variance for intention to persist thus confirming that there are other variables that need to be explored to understand what else contributes to intention to persist. These results are consistent with previous research that shows sense of belonging contributes, although a small percentage, to students' persistence (Berger & Milem, 1999; Cabrera et al., 1993; Hoffman et al., 2002; Milem & Berger, 1997).

### **Limitations**

There are limitations to this study in instrumentation, participants, and variables. First, the NAICSI is the first quantitative measure to look at cultural integrity, and as such, is very new and still being developed. Second, the IIS-R, while showing acceptable

reliability within this sample, has not been validated for Native American students.

Further, the dependent variable for research question three, intention to persist, violated the assumption of normality of distribution; an explanation for this may be due to the fact that two items from a subscale of six items computed this variable.

The diversity of the tribes represented within the participants was low. The majority of respondents reported their tribal affiliation as Lumbee ( $n = 57$ ) followed by Cherokee ( $n = 16$ ) and Navajo (Diné) ( $n = 14$ ). Although the researcher reached out nationally to obtain as much variability in tribal participation, due to the location of the researcher, relationship with the Lumbee community, and possible recognition of the researcher's last name could account for the proportion of Lumbee respondents. Because of this, the generalizability of the findings is limited.

Another limitation of this study is a majority of participants (75%) identified as juniors, seniors, and graduate students. This could be problematic for this study because these participants are beyond the typical critical points—during the first year and prior to second year—of college dropout (Ishler & Upcraft, 2005; Tinto, 1988). If respondents had represented all four undergraduate class years, it is probable that greater variation would have been observed in the intention to persist. It also is likely that the intention to persist is very different for graduate students than it is for undergraduates and that different factors may contribute to persistence for graduate students than for undergraduates. Finally, a majority (75%) of respondents were female and thus the findings of this study cannot be generalized with certainty to other samples (Howell, 2009).



### **Significance of the Study**

This study adds to the very small portion of literature that looked quantitatively at Native American college students. Most of the literature on Native American students has been qualitative studies with a small number of participants or identified as not statistically significant in quantitative studies with the “American Indian research asterisk” (Garland, 2010, p. 1) omitting Native American students from analysis. The continued marginalization of Native American student experiences predisposes anyone reading this research to inherently ignore Native American students and further privileges dominant culture. Lowe (2005) re-affirms the need for more culturally relevant research:

It is well past time to combat approaches to education research that marginalize Native American students. Footnotes indicating that findings on Native Americans are not statistically significant and so are omitted from the research are too often the only reference to Native Americans in much of the literature in higher education. Such footnotes are no longer acceptable as results. The Native student population may not be large, depending on where you look for it, but it is important and worthy of study . . . already too much time has gone by without an adequate volume of research on the experiences of Native American students. Native students need to be asked about their experiences and given the opportunity to tell their story. (p. 39)

The current study contributes to the literature on both the IIS-R and the newly developed NAICSI as well as the literature on sense of belonging from the perspective of Native American students.

### **Implications for Practice**

As measured by the NAICSI staff support subscale, a significant contribution to sense of belonging for Native American students was having Native American staff on campus. The Student Affairs profession, as part of the staff population within higher

education, needs to continue to find ways to promote Native American student sense of belonging. This study provides more information on how to support Native American students through fostering staff support, combatting social isolation, and promoting opportunities for Native American students to make friends.

Furthermore, the findings from this study underscore the important role that staff plays in ensuring Native American students feel welcomed into and that they belong in their institutions. Though student affairs professionals are on the front lines of providing support and services for Native American students, there is a concern that professionals lack the cultural knowledge about Native American students needed in order to better provide them with support (Tierney, 1992; Tippeconnic Fox, 2005). Inclusion of Native American cultures and Native American students within the curriculum of graduate preparation programs for student affairs would better prepare professionals for working with Native American students.

National professional associations within higher education (e.g., NASPA, ACPA, ASHE, AERA) also have a role in providing continuing education to current professionals about Native American students which could come in the form of conference sessions, webinars, research, writing, mentorship, inclusion in structures, and promotion of culturally relevant paradigm shifts within the higher education (Ecklund & Terrance, 2013; Garland & McClellan, 2013; Garrod & Larimore, 1997). Furthermore, in addition to increasing cultural competency within higher education regarding Native American students, the findings from this study show that there is a dire need to increase the recruitment and retention of Native American faculty and staff (Oxendine, Oxendine,

& Taub, 2014; Pewewardy, 2013). This study clearly shows that the Native American students do not view staff and faculty as similarly contributing to their sense of belonging.

### **Implications for Future Research**

This study provides new insight into the perspectives of Native American students' sense of belonging while at the same time bringing up many areas that are ripe for further exploration. Future research can both broaden and deepen our understanding of Native American student sense of belonging through more quantitative and qualitative research. In doing so, researchers should seek as broad a tribal representation as possible to increase the generalizability of the results. The number of federally recognized tribal nations included 566 tribal entities in 2014 (*Federal Register*, 2014) with over 50 state recognized tribes and 200 non-recognized tribal (Legislatures, 2015; O'Brien, 2014).

In addition, future research should explore other predictors of persistence for Native American students such as academic achievement, financial stability, involvement, and campus racial climate. Promising areas for future research that came up as significant factors within this study and should be studied more deeply are social support, peer relations, the role of staff, and the lack of social isolation. In particular, the role of involvement and engagement in cultural affinity groups (such as Native American Student Organizations, Historically Native American Fraternities and Sororities, etc.) can shed light on the role of cultural integrity as supported within the campus community. There is much diversity within Native American students that could broaden our understanding of their sense of belonging and intention to persist by honing in on within-

group differences such as gender, year in school, tribe, type of institution, and involvement in student groups.

A comparison of samples of students from TCUs in regards to their sense of belonging and intention to persist, because the researcher in this study presumes that students at TCUs feel a greater sense of belonging than Native American students at NNCUs. Finally, though this study utilized self-reported intention to persist as one the dependent variable for research question three as it has been shown to be a reasonable proxy for actual intention to persist (Bean & Eaton, 2000; Fishbein & Ajzen, 1975 (Cabrera et al., 1992), the researcher would recommend future research looking at the rates of actual persistence with Native American students.

### **Conclusion**

For too long researchers and higher education administrators and professionals have used the small representation of Native American students on any given campus and within higher education in general as a justification not to include this student population. It is clear that quantitative research is lacking due to the difficulty of attaining a large enough sample size. Furthermore, many administrators and student affairs professionals should support initiatives within their institutions to increase sense of belonging because Native American students are the minority of the minorities. Even though the percentage of Native American student participation is small, making up only 1% of the total college student population, Native students are still the least likely to persist and graduate from post-secondary institutions (Aud, Fox, & KewalRamani, 2010; DeVoe & Darling-Churchill, 2008). In addition, the majority of Native American students are attending

NNCUs as compared to TCUs that enroll 8.7% of the total population of Native American students in post-secondary institution (Education, n.d.).

As the “gatekeepers” of education, the faculty, staff, and administrators of higher education, must move away from the policy, procedures, and practices that place students’ culture as a deficit to their success in higher education. The burden should not be solely centered on students to assimilate and conform to the institutional culture; rather, we need to shift towards a reciprocal relationship that helps Native American students develop their knowledge of institutional culture without sacrificing their own cultural identity. In contributing to Native American college students’ success we are building up the capacity for the betterment of “Indian Country” through nation building. Nation building has been defined as:

The process of nation building consists of legal and political, cultural, economic, health and nutrition, spiritual, and educational elements with the well-being, sovereignty, self-determination, and autonomy of the community as the driving force for nation building. (Brayboy, Castagno, & Fann, 2012, p. 13)

Thus, we can clearly see that Native American nation building and academic success in higher education is symbiotic and one cannot happen without the other.

## REFERENCES

- Akee, R. Q., & Yazzie-Mintz, T. (2011). "Counting experience" among the least counted: The role of cultural and community engagement on educational outcomes for American Indian, Alaska Native, and Native Hawaiian students. *American Indian Culture & Research Journal*, 35(3), 119–150.
- Alfred, T. (1999). *Peace, power, righteousness: An Indigenous manifesto*. Toronto, ON: Oxford University Press.
- Allen-Wallace, M. V. (2010). *Reality to actuality: Postsecondary readiness for students with learning disabilities focus on academic success*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.
- Ancar, L. N. (2008). *Social and academic factors of success and retention for students of color at a predominantly White institution in agricultural and engineering based disciplines*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.
- Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25(4), 297–308.
- Astin, A. W. (1975). *Preventing students from dropping out* (1st ed.). San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1993). *What matters in college?: Four critical years revisited* (1st ed.). San Francisco, CA: Jossey-Bass.

- Astin, A. W. (1997). How “good” is your institution’s retention rate? *Research in Higher Education*, 38(6), 647–658. doi: 10.1023/a:1024903702810
- Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, 40(5), 518–529.
- Astin, A. W., Tsui, L., & Avalos, J. (1996). *Degree attainment rates at American colleges and universities: Effects of race, gender, and institutional type*. Los Angeles, CA: Higher Education Research Institute, UCLA.
- Attinasi, L. C. (1992). Rethinking the study of outcomes of college attendance. *Journal of College Student Development*, 33(1), 247–277.
- Baum, S., Ma, J., & Payea, K. (2013). Education pays 2013: The benefits of higher education for individuals and society. *Trends in Higher Education*. New York, NY: College Board.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. doi: 10.1037/0033-2909.117.3.497
- Bean, J. P., & Eaton, S. B. (2000). A psychological model of college student retention. In J. M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 48–61). Nashville, TN: Vanderbilt University Press.
- Benham, M. K. P. A., & Stein, W. J. (2003). *The renaissance of American Indian higher education: Capturing the dream*. New York, NY: Taylor & Francis.
- Benjamin, D., Chambers, S., & Reiterman, G. (1993). A focus on American Indian college persistence. *Journal of American Indian Education*, 32(2), 24–40.

- Bensimon, E. M. (2007). The underestimated significance of practitioner knowledge in the scholarship on student success. *The Review of Higher Education*, 30(4), 441–469.
- Berger, J. B., & Milem, J. F. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education*, 40(6), 641–664. doi: 10.1023/a:1018708813711
- Block, M. (2011). Maslow's hierarchy of needs. In S. Goldstein & Naglieri, J. A. (Eds.), *Encyclopedia of child behavior and development*. New York, NY: Springer.  
Retrieved from <http://dx.doi.org/10.1007/978-0-387-79061-9>
- Bollen, K. A., & Hoyle, R. H. (1990). Perceived cohesion: A conceptual and empirical examination. *Social Forces*, 69(2), 479.
- Braxton, J. M., Milem, J. F., & Sullivan, A. S. (2000). The influence of active learning on the college student departure process: Toward a revision of Tinto's theory. *The Journal of Higher Education*, 71(5), 569–590.
- Brayboy, B. M. J. (2006). Toward a tribal critical race theory in education. *The Urban Review*, 37(5), 425–446. doi: 10.1007/s11256-005-0018-y
- Brayboy, B. M. J., & Castagno, A. E. (2011). Indigenous millennial students in higher education. In F. A. Bonner, A. F. Marbley, & M. F. Howard-Hamilton (Eds.), *Diverse millennial students in college: Implications for faculty and student affairs* (pp. 137–155). Sterling, VA: Stylus Publishing, LLC.
- Breidenbach, D. H., & French, B. F. (2010). Ordinal logistic regression to detect differential item functioning for gender in the institutional integration scale.



*Journal of College Student Retention: Research, Theory and Practice*, 12(3), 339–352.

- Briggs, L. (2011). *An evaluation of commuter students' sense of belonging, satisfaction, and support at a women's college*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.
- Brown, D. L. (2005). American Indian student services at UND. *New Directions for Student Services*, 2005(109), 87–94. doi: 10.1002/ss.157
- Brown, E. F., Donlan, W., & Lee, J. (2010). American Indian/Alaskan Native undergraduate retention at predominantly White institutions: An elaboration of tinto's theory of college student departure. *Journal of College Student Retention: Research, Theory and Practice*, 12(3), 257–276.
- Brown, L. L., & Robinson Kurpius, S. E. (1997). Psychosocial factors influencing academic persistence of American Indian college students. *Journal of College Student Development*, 38(1), 9.
- Burns, K. A., Harper, S. R., Hildebrand, E. S., & Moore, M. N. (2000). Behavioral responses to hate crimes: A study of Asians and Asian-Americans on a university campus. *Journal of Indiana University Student Personnel Association*, 33(1), 14.
- Cabrera, A. F., Castaneda, M. B, Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *The Journal of Higher Education*, 63(2), 143–164.

- Cabrera, A. F., Nora, A., & Castaneda, M. B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *Journal of Higher Education*, 64(2), 123–139.
- Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagedorn, L. S. (1999). Campus racial climate and the adjustment of students to college—A comparison between White students and African-American students. *Journal of Higher Education*, 70(2), 134–160. doi: 10.2307/2649125
- Chickering, A. W. (1969). *Education and identity*. San Francisco: Jossey-Bass.
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Corcoran, L. A. (2010). *Factors influencing transition and persistence in the first year for community college students with disabilities*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. doi: 10.1007/BF02310555
- Dana-Sacco, G. (2010). The Indigenous researcher as individual and collective: Building a research practice ethic within the context of Indigenous languages. *The American Indian Quarterly*, 34(1), 61–82.

- Dancey, C., & Reidy, J. (2004). *Statistics without maths for psychology: Using SPSS for Windows*. London: Prentice Hall.
- Davidson, W. B., Beck, H. P., & Milligan, M. (2009). The College Persistence Questionnaire: Development of an instrument that predicts student attrition. *Journal of College Student Development*, 50(4), 373–390.
- Demcho, M. C. (2011). *Non-academic factors affecting sense of belonging in first year commuter students at a four-year Hispanic serving institution*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database.
- Dennis, J. M., Phinney, J. S., & Chuateco, L. I. (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *Journal of College Student Development*, 46(3), 223–236.
- DeVoe, J. F., & Darling-Churchill, K. E. (2008). Status and trends in the education of American Indians and Alaska Natives: 2008 (NCES 2008-084). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.
- Deyhle, D. (1995a). Constricting failure and maintaining cultural identity: Navajo and Ute school leavers. *Journal of American Indian Education*, 31(2), 24–47.
- Deyhle, D. (1995b). Navajo youth and Anglo racism: Cultural integrity and resistance. *Harvard Educational Review*, 65(3), 403–445.

- Deyhle, D., & Swisher, K. (1997). Research in American Indian and Alaska Native Education: From assimilation to self-determination. *Review of Research in Education*, 22(1), 113–194. doi: 10.3102/0091732x022001113
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Boston, MA: Addison-Wesley.
- Flowers, L. A. (2004). Examining the effects of student involvement on African American college student development. *Journal of College Student Development*, 45(6), 633–654.
- France, M. K., Finney, S. J., & Swerdzewski, P. (2010). Students' group and member attachment to their university: A construct validity study of the University Attachment Scale. *Educational and Psychological Measurement*, 70(3), 440–458. doi: 10.1177/0013164409344510
- Freeman, T. M., Anderman, L. H., & Jensen, J. M. (2007). Sense of belonging in college freshmen at the classroom and campus levels. *The Journal of Experimental Education*, 75(3), 203–220. doi: 10.3200/jexe.75.3.203-220
- French, B. F., & Oakes, W. (2004). Reliability and validity evidence for the Institutional Integration Scale. *Educational and Psychological Measurement*, 64(1), 88–98. doi: 10.1177/0013164403258458
- Garland, J. L. (2010). *Removing the college involvement "research asterisk": Identifying and rethinking predictors of American Indian college student involvement*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.

- Ginder, S. A., & Kelly-Reid, J. E. (2013). *Postsecondary institutions and cost of attendance in 2012-13; degrees and other awards conferred, 2011-12; and 12-month enrollment, 2011-12: First look (provisional data) (nces 2013-289rev)*. Washington, DC: U.S. Department of Education; National Center for Education Statistics.
- Gloria, A. M., & Robinson Kurpius, S. E. (2001). Influences of self-beliefs, social support, and comfort in the university environment on the academic nonpersistence decisions of American Indian undergraduates. *Cultural Diversity and Ethnic Minority Psychology*, 7(1), 88.
- González, K. P. (2002). Campus culture and the experiences of Chicano students in a predominantly White university. *Urban Education*, 37(2), 193–218.  
doi: 10.1177/0042085902372003
- Graunke, S. S., & Woosley, S. A. (2005). An exploration of the factors that affect the academic success of college sophomores. *College Student Journal*, 39(2), 367–377.
- Guardia, J. R., & Evans, N. J. (2008). Factors influencing the ethnic identity development of Latino fraternity members at a Hispanic serving institution. *Journal of College Student Development*, 49(3), 18.
- Guiffrida, D. (2005). To break away or strengthen ties to home: A complex issue for African American college students attending a predominantly White institution. *Equity & Excellence in Education*, 38(1), 49–60.  
doi: 10.1080/10665680590907864

- Guiffrida, D. (2006). Toward a cultural advancement of Tinto's theory. *The Review of Higher Education*, 29(4), 451–472.
- Guillory, R. M. (2009). American Indian/Alaska Native college student retention strategies. *Journal of Developmental Education*, 33(2), 12–38.
- Guillory, R. M., & Wolverton, M. (2008). It's about family: Native American student persistence in higher education. *Journal of Higher Education*, 79(1), 58–87.
- Harper, S. R., & Hurtado, S. (2007). Nine themes in campus racial climates and implications for institutional transformation. *New Directions for Student Services*, 2007(120), 7–24. doi: 10.1002/ss.254
- Hausmann, L., Schofield, J., & Woods, R. (2007). Sense of belonging as a predictor of intentions to persist among African American and White first-year college students. *Research in Higher Education*, 48(7), 803–839.  
doi: 10.1007/s11162-007-9052-9
- Hausmann, L., Ye, F., Schofield, J., & Woods, R. (2009). Sense of belonging and persistence in White and African American first-year students. *Research in Higher Education*, 50(7), 649–669. doi: 10.1007/s11162-009-9137-8
- Henze, R. C., & Vanett, L. (1993). To walk in two worlds—or more? Challenging a common metaphor of Native education. *Anthropology & Education Quarterly*, 24(2), 116–134. doi: 10.1525/aeq.1993.24.2.05x1117y
- Hoffman, M., Richmond, J., Morrow, J. A., & Salomone, K. (2002). Investigating “sense of belonging” in first-year college students. *Journal of College Student Retention: Research, Theory and Practice*, 4(3), 227–256.

- Horse, P. G. (2005). Native American identity. *New Directions for Student Services*, 109, 61–68.
- Howell, D. C. (2009). *Fundamental statistics for the behavioral sciences* (7th ed.). Belmont, CA: Duxbury Press.
- Howell, D. C. (2012). *Statistical methods for psychology*. Pacific Grove, CA: Duxbury.
- Huffman, T. E. (1991). The experiences, perceptions, and consequences of campus racism among Northern Plains Indians. *Journal of American Indian Education*, 30(2), 25–34.
- Huffman, T. E. (1997). The transculturation of Native American students. In J. J. Macionis & N. V. Benokraitis (Eds.), *Seeing ourselves: Classic, contemporary, and cross-cultural readings in sociology* (pp. 211–219). Upper River, NJ: Prentice-Hall.
- Huffman, T. E. (1999). *Cultural masks: Ethnic identity and American Indian higher education*. Stone Creek Press.
- Huffman, T. E. (2001). Resistance theory and the transcultural hypothesis as explanations of college attrition and persistence among culturally traditional American Indian students. *Journal of American Indian Education*, 40(3), 1–23.
- Huffman, T. E. (2003). A comparison of personal assessments of the college experience among reservation and nonreservation American Indian students. *Journal of American Indian Education*, 42(2), 1–16.
- Huffman, T. E. (2008). *American Indian higher educational experiences: Cultural visions and personal journeys*. New York, NY: Peter Lang.

- Huffman, T. E. (2010). *Theoretical perspectives on American Indian education: Taking a new look at academic success and the achievement gap*. Lanham, MD: AltaMira Press.
- Huffman, T. E. (2011). Plans to live on a reservation following college among American Indian students: An examination of transculturation theory. *Journal of Research in Rural Education*, 26(3), 1–13.
- Huffman, T. E., & Ferguson, R. (2007). Evaluation of the college experience among American Indian upperclassmen. *Great Plains Research*, 17(1), 61–71.
- Hurtado, S., & Carter, D. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education*, 70(4), 324–345.
- Hurtado, S., Carter, D., & Spuler, A. (1996). Latino student transition to college: Assessing difficulties and factors in successful college adjustment. *Research in Higher Education*, 37(2), 135–157. doi: 10.1007/BF01730113
- Hurtado, S., Engber, M. E., & Ponjuan, L. (2003). *The impact of the college experience on students' learning for a diverse democracy*. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Portland, Oregon.
- Hurtado, S., Milem, J. F., & Clayton-Pedersen, A. (1999). Enacting diverse learning environments: Improving the climate for racial/ethnic diversity in higher education. *ASHE-ERIC Higher Education Reports*, 26(8), 1–116.
- IBM Corp. (2013). IBM SPSS Statistics for Macintosh, Version 22.0. Armonk, NY: Author.



- Jackson, A. P., Smith, S. A., & Hill, C. L. (2003). Academic persistence among Native American college students. *Journal of College Student Development, 44*(4), 548–565.
- Jacoby, B., & Garland, J. (2004). Strategies for enhancing commuter student success. *Journal of College Student Retention, 6*(1), 61–79.
- Jahansouz, S., & Oxendine, S. D. (2008). The Native American fraternal values movement: Past, present, & future. *Perspectives*(Spring), 1.
- Johnson, D. R., Soldner, M., Leonard, J. B., Alvarez, P., Inkelas, K. K., Rowan-Kenyon, H. T., & Longerbeam, S. D. (2007). Examining sense of belonging among first-year undergraduates from different racial/ethnic groups. *Journal of College Student Development, 48*(5), 525–542.
- Jones, L., Castellanos, J., & Cole, D. (2002). Examining the ethnic minority student experience at predominantly White institutions: A case study. *Journal of Hispanic Higher Education, 1*(1), 19–39. doi: 10.1177/1538192702001001003
- Juntunen, C. L., Barraclough, D. J., Broneck, C. L., Seibel, G. A., Winrow, S. A., & Morin, P. M. (2001). American Indian perspectives on the career journey. *Journal of Counseling Psychology, 48*(3), 274–285. doi: 10.1037/0022-0167.48.3.274
- Kelley, K., & Preacher, K. J. (2012). On effect size. *Psychological Methods, 17*(2), 137–152. doi: 10.1037/a0028086
- Kimbrough, W. M., & Hutcheson, P. A. (1998). The impact of membership in Black greek-letter organizations on Black students' involvement in collegiate activities

- and their development of leadership skills. *The Journal of Negro Education*, 67(2), 96–105.
- Kuh, G. D., Kinzie, J., Buckley, J., & Hayek, J. (2006). *What matters to student success: A review of the literature* (Executive summary). Commissioned report for the National Symposium on Postsecondary Student Success.
- Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2005). *Student success in college: Creating conditions that matter*. San Francisco, CA: Jossey-Bass.
- Larimore, J. A., & McClellan, G. S. (2005). Native American student retention in U.S. postsecondary education. *New Directions for Student Services*, 2005(109), 17–32.
- Littleton, R. A. (2002). Campus involvement among African American students at small, predominantly white colleges. *College Student Affairs Journal*, 21(2), 53–67.
- Locks, A. M., Hurtado, S., Bowman, N. A., & Oseguera, L. (2008). Extending notions of campus climate and diversity to students' transition to college. *Review of Higher Education*, 31(3), 257–285.
- Lundberg, C. A. (2007). Student involvement and institutional commitment to diversity as predictors of Native American student learning. *Journal of College Student Development*, 48(4), 405–417.
- Maestas, R., Vaquera, G. S., & Zehr, L. M. (2007). Factors impacting sense of belonging at a Hispanic-Serving Institution. *Journal of Hispanic Higher Education*, 6(3), 237–256.
- Maramba, D. C., & Museus, S. D. (2011). The utility of using mixed-methods and intersectionality approaches in conducting research on Filipino American

- students' experiences with the campus climate and on sense of belonging. *New Directions for Institutional Research*, 2011(151), 93–101. doi: 10.1002/ir.401
- Marroquin, C. A., & McCoach, D. B. (2014). *Measuring cultural integrity through the lens of transculturation: Psychometric properties of the North American Indigenous College Students Inventory (NAICSI)*. Paper presented at the American Educational Research Association, Philadelphia, PA.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
- Maslow, A. H. (1962). *Towards a psychology of being*. New York, NY: D. Van Nostrand Company.
- Maslow, A. H. (1968). *Towards a psychology of being*. New York, NY: D. Van Nostrand Company.
- McClure, S. M. (2006). Voluntary association membership: Black Greek men on a predominantly White campus. *Journal of Higher Education*, 77(6), 1036–1057.
- McKinney, J. P., McKinney, K. G., Franiuk, R., & Schweitzer, J. (2006). The college classroom as a community: Impact on student attitudes and learning. *College Teaching*, 54(3), 281–284.
- Micari, M., & Pazos, P. (2012). Connecting to the professor: Impact of the student-faculty relationship in a highly challenging course. *College Teaching*, 60(2), 41–47.

- Morrow, J. A., & Ackermann, M. E. (2012). Intention to persist and retention of first-year students: The importance of motivation and sense of belonging. *College Student Journal, 46*(3), 483–491.
- Murguia, E., Padilla, R. V., & Pavel, M. D. (1991). Ethnicity and the concept of social integration in Tinto's model of institutional departure. *Journal of College Student Development, 32*(September), 433–439.
- Murphy, K. R., Myors, B., & Wolach, A. (2014). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests* (4th ed.). New York, NY: Taylor & Francis.
- Museus, S. D. (2008). The role of ethnic student organizations in fostering African American and Asian American students' cultural adjustment and membership at predominantly White institutions. *Journal of College Student Development, 49*(6), 568–586.
- Museus, S. D., & Maramba, D. C. (2011). The impact of culture on Filipino American students' sense of belonging. *Review of Higher Education, 34*(2), 231–258. doi: 10.1080/10705519909540118.1998-03102-00110.1080/10705519909540118
- Museus, S. D., & Neville, K. M. (2012). Delineating the ways that key institutional agents provide racial minority students with access to social capital in college. [Yes]. *Journal of College Student Development, 53*(3), 436–452.
- Museus, S. D., Nichols, A. H., & Lambert, A. D. (2008). Racial differences in the effects of campus racial climate on degree completion: A structural equation model. *The Review of Higher Education, 32*(1), 107–134.

- Nora, A. (2001). The depiction of significant others in Tinto's "rites of passage": A reconceptualization of the influence of family and community in the persistence process. *Journal of College Student Retention*, 3(1), 41–56.
- Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *The Journal of Higher Education*, 67(2), 119–148.
- Núñez, A. (2009). A critical paradox? Predictors of Latino students' sense of belonging in college. *Journal of Diversity in Higher Education*, 2(1), 46–61.  
doi: 10.1037/a0014099
- Okagaki, L., Helling, M. K., & Bingham, G. E. (2009). American Indian college students' ethnic identity and beliefs about education. *Journal of College Student Development*, 50(2), 157–176.
- Ortiz, A. M., & HeavyRunner, I. (2003). Student access, retention, and success: Models of inclusion and support. In M. K. P. Benham & W. J. Stein (Eds.), *The renaissance of American Indian higher education: Capturing the dream* (pp. 215–240). Mahwah, NJ: Lawrence Erlbaum.
- Ostrove, J. M., & Long, S. M. (2007). Social class and belonging: Implications for college adjustment. *Review of Higher Education*, 30(4), 363–389.
- Palmer, R., & Gasman, M. (2008). "It takes a village to raise a child": Social capital and academic success at Historically Black Colleges and Universities. *Journal of College Student Development*, 49(1), 52–70.

- Palmer, R. T., & Young, E. M. (2009). Determined to succeed: Salient factors that foster academic success for academically unprepared Black males at a Black college. *Journal of College Student Retention, 10*(14), 465–482.
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students* (Vol. 2). San Francisco, CA: Jossey-Bass.
- Pascarella, E. T., Duby, P. B., Vernon, A. M., & Rasher, S. (1981). Preenrollment variables and academic performance as predictors of freshman year persistence, early withdrawal, and stopout behavior in an urban, nonresidential university. *Research in Higher Education, 15*(4), 329–349.
- Pascarella, E. T., & Terenzini, P. T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *The Journal of Higher Education, 51*(1), 60–75. doi: 10.2307/1981125
- Pascarella, E. T., & Terenzini, P. T. (1983). Predicting voluntary freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of the Tinto model. *Journal of Educational Psychology, 85*, 215–226.
- Pavel, D. M. (1991). *Assessing the fit of Tinto's model of institutional departure with American Indian and Alaskan Native national longitudinal data* (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.
- Pavel, D. M., & Padilla, R. V. (1993). American Indian and Alaska native postsecondary departure: An example of assessing a mainstream model using national longitudinal data. *Journal of American Indian Education, 32*(2), 1–23.

- Pelavin, S. H., & Kane, M. B. (1990). *Minority participation in higher education* (O. o. P. Department of Education, Budget, and Evaluation, Trans.). Washington, DC: Pelavin Associates, Inc.
- Peltier, G. L., Laden, R., & Matranga, M. (1999). Student persistence in college: A review of research. *Journal of College Student Retention*, 1(4), 357–375.
- Perry, W. G., Jr. (1968). *Patterns of development in thought and values of students in a liberal college: A validation of a scheme*. Washington, DC: U.S. Department of Health, Education, and Welfare (Final Report, Project No. 5-0825, Contract No. SAE-8973).
- Peshkin, A. (1988). In search of subjectivity—one's own. *Educational researcher*, 17(7), 17–21.
- Pewewardy, C., & Frey, B. (2004). American Indian students' perceptions of racial climate, multicultural support services, and ethnic fraud at a predominantly White university. *Journal of American Indian Education*, 43(1), 32–60.
- Pittman, L. D., & Richmond, A. (2008). University belonging, friendship quality, and psychological adjustment during the transition to college. *Journal of Experimental Education*, 76(4), 343–361. doi: 10.3200/jexe.76.4.343-362
- Rea, L. M., & Parker, R. A. (1997). *Designing and conducting survey research: A comprehensive guide*. San Francisco, CA: Jossey-Bass.
- Reason, R. D., Terenzini, P. T., & Domingo, R. J. (2006). First things first: Developing academic competence in the first year of college. *Research in Higher Education*, 47(2), 149–175.

- Reisen, C. A., Zea, M. C., & Caplan, R. C. (1999). A longitudinal study of the effects of academic and social integration and commitment on retention. *NASPA Journal*, 37(1), 1–10.
- Rencher, A. C. (2002). *Methods of multivariate analysis* (Second ed.). New York, NY: Wiley.
- Rendón, L. I., Jalomo, R. E., & Nora, A. (2000). Theoretical considerations in the study of minority student retention in higher education. In J. M. Braxton (Ed.), *Reworking the student departure puzzle* (Vol. 1, pp. 127–156). Nashville, TN: Vanderbilt University Press.
- Rhee, B. (2008). Institutional climate and student departure: A multinomial multilevel modeling approach. *Review of Higher Education*, 31(2), 161–174, 178–183.
- Sanford, N. (1962). *The American college*. New York, NY: Wiley.
- Seidman, A. (2005). Minority student retention: Resources for practitioners. *New Directions for Institutional Research*, 2005(125), 7–24.
- Shotton, H. J., Lowe, S. C., & Waterman, S. J. (2013). Introduction. In H. J. Shotton, S. C. Lowe, & S. J. Waterman (Eds.), *Beyond the asterisk: Understanding Native students in higher education*. Sterling, VA: Stylus Publishing.
- Spanierman, L. B., Soble, J. R., Mayfield, J. B., Neville, H. A., Aber, M., Khuri, L., & De La Rosa, B. (2013). Living learning communities and students' sense of community and belonging. *Journal of Student Affairs Research and Practice*, 50(3), 308–325. doi: 10.1515/jsarp-2013-0022



- Stage, F. (1989). Reciprocal effects between academic and social integration of college students. *Research in Higher Education*, 30(5), 517–530.
- Stoecker, J., Pascarella, E. T., & Wolfle, L. (1988). Persistence in higher education: A 9-year test of a theoretical model. *Journal of College Student Development*, 29(3), 196–209.
- Strayhorn, T. L. (2008a). Fittin’ in: Do diverse interactions with peers affect sense of belonging for Black men at predominantly White institutions? *Journal of Student Affairs Research and Practice*, 45(4), 501–527. doi: 10.2202/1949-6605.2009
- Strayhorn, T. L. (2008b). Sentido de pertenencia: A hierarchical analysis predicting sense of belonging among Latino college students. *Journal of Hispanic Higher Education*, 7(4), 301–320. doi: 10.1177/1538192708320474
- Strayhorn, T. L. (2010). When race and gender collide: Social and cultural capital’s influence on the academic achievement of African American and Latino males. *The Review of Higher Education*, 33(3), 307–332.
- Strayhorn, T. L. (2011). Bridging the pipeline: Increasing underrepresented students’ preparation for college through a summer bridge program. *American Behavioral Scientist*, 55(2), 142–159. doi: 10.1177/0002764210381871
- Strayhorn, T. L. (2012). *College students’ sense of belonging: A key to educational success for all students*. New York, NY: Routledge.
- Strayhorn, T. L., & Saddler, T. N. (2009). Gender differences in the influence of faculty-student mentoring relationships on satisfaction with college among African Americans. *Journal of African American Studies*, 13(4), 476–493.

- Strayhorn, T. L., & Terrell, M. C. (2007). Mentoring and satisfaction with college for Black students. *Negro Educational Review*, 58, 69–83.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55.
- Tierney, W. G. (1992a). An anthropological analysis of student participation in college. *The Journal of Higher Education*, 63(6), 603–618.
- Tierney, W. G. (1992b). *Official encouragement, institutional discouragement: Minorities in academia-the Native American experience*. Norwalk, NJ: Ablex.
- Tierney, W. G. (1999). Models of minority college-going and retention: Cultural integrity versus cultural suicide. *The Journal of Negro Education*, 68(1), 80–91.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89–125.  
doi: 10.3102/00346543045001089
- Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago, IL: University of Chicago Press.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. (2nd ed.). Chicago, IL: University of Chicago Press.
- Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education*, 68, 599–623.
- Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention*, 8(1), 1–19.

- Tinto, V. (2012). *Completing college: Rethinking institutional action*. Chicago, IL: The University of Chicago Press.
- Tippeconnic Fox, M. J., Lowe, S. C., & McClellan, G. S. (2005). Where we have been: A history of Native American higher education. *New Directions for Student Services*, 2005(109), 7–15.
- Tovar, E. (2013). *A conceptual model on the impact of mattering, sense of belonging, engagement/involvement, and socio-academic integrative experiences on community college students' intent to persist*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.
- Tovar, E., & Simon, M. A. (2010). Factorial structure and invariance analysis of the sense of belonging scales. *Measurement and Evaluation in Counseling and Development*, 43(3), 199–217. doi: 10.1177/0748175610384811
- Tovar, E., Simon, M. A., & Lee, H. B. (2009). Development and validation of the college mattering inventory with diverse urban college students. *Measurement & Evaluation in Counseling & Development*, 42(3), 154–178.
- Villalpando, O., & Solorzano, D. G. (2005). The role of culture in college preparation programs: A review of the research literature. In W. G. Tierney, Z. B. Corwin, & J. E. Colyar (Eds.), *Preparing for college: Nine elements of effective outreach* (pp. 13–28). Albany, NY: State University of New York Press.
- Waterman, S. J. (2004). *The Haudenosaunee college experience: A complex path to degree completion* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.

- Waterman, S. J. (2012). Home-going as a strategy for success among haudenosaunee college and university students. *Journal of Student Affairs Research and Practice*, 49(2), 193–209.
- White Shield, R. (2004). The retention of Indigenous students in higher education: Historical issues, federal policy, and Indigenous resilience. *Journal of College Student Retention: Research, Theory and Practice*, 6(1), 111–127.
- White Shield, R. (2009). Identifying and understanding Indigenous cultural and spiritual strengths in the higher education experiences of Indigenous women. *Wicazo Sa Review*, 24(1), 47–63.
- Wiersma, W. (2000). *Research methods in education: An introduction*. Boston, MA: Allyn & Bacon.
- Woodward, W. C. (2013). *A qualitative exploration of mattering and belonging in the transfer student experience*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations & Theses Full Text database.
- Zea, M. C., Reisen, C. A., Beil, C., & Caplan, R. D. (1997). Predicting intention to remain in college among ethnic minority and nonminority students. *The Journal of Social Psychology*, 137(2), 149–160.
- Zumbrunn, S., McKim, C., Buhs, E., & Hawley, L. R. (2014). Support, belonging, motivation, and engagement in the college classroom: A mixed method study. *Instructional Science*, 1–24. doi: 10.1007/s11251-014-9310-0

**APPENDIX A**  
**LETTERS OF SUPPORT**

UNCG Institutional Review Board  
The Office of Research Integrity  
The University of North Carolina at Greensboro  
2718 MHRA Building, 1111 Spring Garden Street  
Greensboro, NC 27412

Dear Colleagues,

I am writing to inform you of my support for the dissertation study entitled “The Effects of Academic Integration, Social Integration, and Cultural Integrity on Sense of Belonging and Intention to Persist for Native American Students at Non-Native Colleges and Universities” which will be conducted by Symphony Oxendine. The researcher has shared and discussed the study with myself, the chair of the Native American Network.

This study will assist the student affairs profession and the higher education landscape with providing information about the factors that contribute to Native American college students’ sense of belonging within the campus community and their intention to persist, as well as illuminating the impact of cultural identity on students’ collegiate success.

As chair of the Native American Network I support the research proposed. I will send the recruitment material, on behalf of the researcher, to our membership listserv for their dissemination of the recruitment material approved by the UNCG IRB to prospective participants. I agree with all procedures and believe that the data obtained will be beneficial.

Sincerely,



Heather M. Kind-Keppel, M.S., M. Ed.  
Chair, Native American Network  
ACPA, College Student Educators International



September 23, 2014

UNCG Institutional Review Board  
The Office of Research Integrity  
The University of North Carolina at Greensboro  
2718 MHRA Building, 1111 Spring Garden Street  
Greensboro, NC 27412

Dear Colleagues,

I am writing to inform you of my support for the dissertation study entitled, "The Effects of Academic Integration, Social Integration and Cultural Integrity on Sense of Belonging and Intention to Persist for Native American Students at Non-Native Colleges and Universities", which will be conducted by Symphony Oxendine. The researcher has shared and discussed the study with myself and/or a representative of our agency, the American Indian Graduate Center (AIGC).

This study will assist the student affairs profession and the higher education landscape with providing information about the factors that contribute to Native American college students' sense of belonging within the campus community and their intention to persist, as well as illuminating the impact of cultural identity on students' collegiate success.

As Director for Graduate Fellowships and Special Programs of AIGC, I/we support the research proposed. I will send the recruitment material, on behalf of the researcher, to our listserv for their dissemination of the recruitment material approved by the UNCG IRB to prospective participants. "I or we" agree with all procedures and believe that the data obtained will be beneficial.

Sincerely,

A handwritten signature in black ink, appearing to read "Melvin E Monette", with a stylized flourish at the end.

Melvin E Monette  
Director for Graduate Fellowships and Special Programs  
American Indian Graduate Center, Inc.



**NATIONAL INDIAN  
EDUCATION ASSOCIATION**

1514 P Street, NW, Suite B  
Washington, DC 20002

P. (202) 544-7290

F. (202) 544-7293

E. NIEA@NIEA.org

🐦 @WereNIEA

📘 NIEAFanPage

www.niea.org

Sept. 24, 2014

To whom it may concern,

I confirm that I have the authority to grant permission for information to be shared on the NIEA Facebook page, on behalf of Symphony Oxendine, in order to invite Native American students to participate in an anonymous online survey for the purpose of gathering information for a doctoral dissertation research study.

Name of person granting authority: Ahniwake Rose

Position of person granting authority: Executive Director

Organization above person represents: National Indian Education Association

Approximate number of people who will receive the Facebook posting: 2,500

Should you have any questions, please feel free to contact Ahniwake Rose at 202.544.7290 or [arose@niea.org](mailto:arose@niea.org).

*Advancing Excellence for All Native Students*

6/6/2014

UNCG Mail - Request to serve as Site Coordinator for Dissertation



Symphony Oxendine &lt;sdmcdan2@uncg.edu&gt;

---

**Request to serve as Site Coordinator for Dissertation**


---

**Derek R. Oxendine** <derek.oxendine@uncp.edu>  
 To: Symphony Oxendine <sdmcdan2@uncg.edu>

Fri, May 23, 2014 at 1:49 PM

I confirm that I have the authority to grant permission for an email to be forwarded to enrolled Native American students, on behalf of Symphony Oxendine, in order to invite Native American students to participate in an anonymous online survey for the purpose of gathering information for a doctoral dissertation research study. Additionally, I agree to assist in sending out this email to our students.

Name of person granting authority: [Derek Oxendine](#)

Position of person granting authority: [Academic Advisor](#)

Organization above person represents: [UNCP](#)

Approximate number of people who will receive the email request: [1000+](#)

Derek Oxendine

Derek Oxendine, M.Ed.

Academic Advisor, Advising Center

The University of North Carolina at Pembroke

[derek.oxendine@uncp.edu](mailto:derek.oxendine@uncp.edu)

Office: 910.521.6243

Direct: 910.775.4527

Fax: 910.775.4528





Dean of Students Office  
Native American Student Affairs

Nugent Building  
P.O. Box 210040  
Tucson, AZ 85721-0040  
Tel: 520.621.3835  
Fax: 520.621.9880

UNCG Institutional Review Board  
The Office of Research Integrity  
The University of North Carolina at Greensboro  
2718 MHRA Building, 1111 Spring Garden Street  
Greensboro, NC 27412

Dear Colleagues,

On behalf of the Native American Student Affairs at the University of Arizona, it is my pleasure to support the Research Project entitled "The Effects of Academic Integration, Social Integration, and Cultural Integrity on Sense of Belonging and Intention to Persist for Native American Students at Non-Native Colleges and Universities" which will be conducted by Symphony Oxendine. Ms. Oxendine has shared and discussed the study, and I am committed to participating.

This study will assist in finding out what factors contribute to Native American college students' sense of belonging and cultural integrity within the campus community. Therefore, providing higher education professionals and institutions better strategies for supporting Native American students on our campuses. As a Native professional in higher education, I understand the critical importance of research studies such as this one. I commend Ms. Oxendine's work to increase the literature and to help better the collegiate experience of our Native American students.

As Program Director of the University of Arizona Native American Student Affairs, I support the research proposed. I will send a link to the survey, on behalf of the researchers, to the Native American students at my institution. I agree with all Procedures and believe that the data obtained will be beneficial.

Sincerely,

*Steven Martin*

Steven Martin, Program Director  
Native American Student Affairs  
University of Arizona

## APPENDIX B

### SCRIPTED EMAIL

Dear Colleagues;

I want to thank all of you for taking the time to forward this message on my behalf and supporting my research throughout my doctoral work. I am currently a Higher Education doctoral student at The University of North Carolina at Greensboro, under the mentorship of Dr. Deborah J. Taub, conducting dissertation research to examine the factors that contribute to Native American college students' sense of belonging within the campus community and their intention to persist, as well as illuminating the impact of cultural identity on students' collegiate success. For the purposes of my study, Native American includes anyone who self-identifies as part of the indigenous population of the Americas including indigenous people of Alaska, Hawaii and American Samoa. I am seeking to sample Native American students from all over the country at Non-Tribal Colleges and Universities and would like to include your institution and its students in my research.

Your assistance in publicizing the survey via Facebook and forwarding the attached email is the best way to implement my survey. I am not requesting access to your student list but merely your help in distributing the survey on my behalf to your students. There is a possibility I might request for one reminder email to also be sent out, depending on the result from the initial invitation.

I appreciate your consideration and attention to this request. It is my hope to add to the Native American student and higher education knowledge base and work to add to the scarce literature base that exists regarding Native American students' experiences and success in higher education.

Please do not hesitate to contact me if you have any questions or concerns.

Symphony D. Oxendine, Doctoral candidate, UNCG  
(Cherokee/Mississippi Choctaw)

Dr. Deb Taub, Faculty  
Teacher Education and Higher Education, UNCG

\*\*\*\*\*

Please copy the following to Facebook or forwarding via email:

Hey Everyone!

Symphony Oxendine (Cherokee/Mississippi Choctaw) is doing a study for her doctoral degree at the University of North Carolina at Greensboro. Symphony has served in several roles within higher education supporting Native American student success.

Her study will explore what factors contribute to Native American college students' sense of belonging and cultural integrity within the campus community. If you are 18 or older and identify as Native American, which includes anyone who self-identifies as part of the indigenous population of the Americas including indigenous people of Alaska, Hawaii and American Samoa, and attend a 4-year public or private institution, you are eligible to participate in this research study. By completing this survey, you may be helping promote an awareness regarding Native American students' experiences and success in higher education.

Link: <link>

Your participation will be approximately 15 minutes and is anonymous, completely voluntary, and you will not be contacted again in the future. There is no compensation for participating in this research; you will not be paid for being in this study. However, if you do decide to participate, you will have the opportunity to enter a drawing for one of the six \$25.00 American Express Gift Cards after completing the survey. Completing this survey involves minimal risk to you. Recipients of the gift cards will be contacted in November 2014 and the gift cards will be mailed out two days after recipients provide their contact information.

Thank you so much!!!

## APPENDIX C

### IRB CONSENT FORM

#### UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

#### CONSENT TO ACT AS A HUMAN PARTICIPANT

Project Title: The Effects of Academic Integration, Social Integration, and Cultural Integrity on Sense of Belonging and Intention to Persist for Native American Students at Non-Native Colleges and Universities

Principal Investigator: Symphony Oxendine

Faculty Advisor: Dr. Deborah J. Taub

#### **What are some general things you should know about research studies?**

You are being asked to take part in a research study. Your participation in the study is voluntary. You may choose not to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. There may not be any direct benefit to you for being in the research study. There also may be risks to being in research studies. If you choose not to be in the study or leave the study before it is done, it will not affect your relationship with the researcher or the University of North Carolina at Greensboro.

Details about this study are discussed in this consent form. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. If you have any questions about this study at any time, you should ask the researchers named in this consent form. Their contact information is below.

#### **What is the study about?**

This is a research project for a dissertation. Your participation is voluntary. This study explores what factors contribute to Native American college students' sense of belonging and cultural integrity within the campus community.

#### **Why are you asking me?**

This survey will sample Native American undergraduate students in 4-year public or private institutions. Eligible participants are those who self-identify as Native American and are enrolled as undergraduate students in a 4-year public or private institution.

Participants must be at least 18 years of age to participate.

**What will you ask me to do if I agree to be in the study?**

If you agree to participate in this study you will take a survey that will take approximately 15 minutes of your time. The survey will ask you questions about your involvement in the campus community, experiences with faculty/staff, academic environment, and perceptions of belonging. You will not be compensated for participating in this study. You are free to contact the investigator at the above address and phone number to discuss the study. You must be at least 18 years old to participate.

**Is there any audio/video recording?**

There will be no audio/video recording in this study.

**What are the dangers to me?**

The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants. There are no foreseen risks and/or inconveniences, other than the time it takes to complete the survey. If any of the questions on the survey make you feel uncomfortable you may choose to skip/not answer any particular question. If you have questions, want more information or have suggestions, contact Symphony Oxendine (Principal Investigator) at [sdmcdan2@uncg.edu](mailto:sdmcdan2@uncg.edu) or by phone at 919-412-7991 or Deborah J. Taub (Faculty Advisor) at [djtaub@uncg.edu](mailto:djtaub@uncg.edu) or by phone at 336-334-4668.

If you have any concerns about your rights, how you are being treated, concerns or complaints about this project or benefits or risks associated with being in this study please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

**Are there any benefits to society as a result of me taking part in this research?**

This study may provide information to better understand how to help Native American students be more successful in higher education.

**Are there any benefits to *me* for taking part in this research study?**

There are no direct benefits to the participants.

**Will I get paid for being in the study? Will it cost me anything?**

There are no costs to you or payments made for participating in this study. However after the completion of the survey, you can elect to include your name and email address to be entered in a drawing for one of six \$25.00 gift cards. If you choose to be entered in the drawing, you will be taken to another screen to enter in your information to ensure anonymity.

**How will you keep my information confidential?**

No personally identifying information will be collected. Demographic information that is collected (e.g. institution) will be recoded to ensure that participants cannot be personally

identified. All information obtained in this study is strictly confidential unless disclosure is required by law. Absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.

The information from respondents in this survey will be collected and stored via UNCG Qualtrics system. There will be no personally identifiable information collected. The survey is set to not collect IP addresses for the surveys. Qualtrics uses Transport Layer Security (TLS) encryption (also known as HTTPS) for all transmitted data. Qualtrics also protect surveys with passwords and HTTP referrer checking.

**What if I want to leave the study?**

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data that has been collected be destroyed unless it is in a de-identifiable state. Choosing not to participate or withdrawing from the study will not affect your relationship with the university from which you were recruited from in any way.

**What about new information/changes in the study?**

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

**Voluntary Consent by Participant:**

By clicking “I Agree” in this survey you are agreeing that you read and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By clicking “I Agree”, you are agreeing that you are 18 years of age or older and are agreeing to participate in this study. You may print copies of this consent documents for your own records by clicking this link and printing the form from your personal computer.

**APPENDIX D**  
**DISSERTATION SURVEY**

Q20

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

CONSENT TO ACT AS A HUMAN PARTICIPANT

Project Title: The Effects of Academic Integration, Social Integration, and Cultural Integrity on Sense of Belonging and Intention to Persist for Native American Students at Non-Native Colleges and Universities

Principal Investigator: Symphony Oxendine

Faculty Advisor: Dr. Deborah J. Taub

**What is the study about?**

This is a research project for a dissertation. Your participation is voluntary. This study explores what factors contribute to Native American college students' sense of belonging and cultural integrity within the campus community.

**Why are you asking me?**

This survey will sample Native American undergraduate students in 4-year public or private institutions. Eligible participants are those who self-identify as Native American and are enrolled as undergraduate students in a 4-year public or private institution. Participants must be at least 18 years of age to participate.

**What will you ask me to do if I agree to be in the study?**

If you agree to participate in this study you will take a survey that will take approximately 15 minutes of your time. The survey will ask you questions about your involvement in the campus community, experiences with faculty/staff, academic environment, and perceptions of belonging. You will not be compensated for participating in this study. You are free to contact the investigator at the above address and phone number to discuss the study. You must be at least 18 years old to participate.

**Is there any audio/video recording?**

There will be no audio/video recording in this study.

**What are the dangers to me?**

The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants. There are no foreseen risks and/or inconveniences, other than the time it takes to complete the survey. If you have questions, want more information or have suggestions, contact Symphony Oxendine (Principal Investigator) at sdmcdan2@uncg.edu or by phone at 919-412-7991 or Deborah J. Taub (Faculty Advisor) at djtaub@uncg.edu or by phone at 336-334-4668. If you have any concerns about your rights, how you are being treated, concerns or complaints about this project or benefits or risks associated with being in this study please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

**Are there any benefits to society as a result of me taking part in this research?**

This study may provide information to better understand how to help Native American students be more successful in higher education.

**Are there any benefits to me for taking part in this research study?**

There are no direct benefits to the participants.

**Will I get paid for being in the study? Will it cost me anything?**

There are no costs to you or payments made for participating in this study. However after the completion of the survey, you can elect to include your name and email address to be entered in a drawing for one of six \$25.00 gift cards. If you choose to be entered in the drawing, you will be taken to another screen to enter in your information to ensure anonymity.

**How will you keep my information confidential?**

No personally identifying information will be collected. Demographic information that is collected (e.g., institution) will be recoded to ensure that participants cannot be personally identified. All information obtained in this study is strictly confidential unless disclosure is required by law. Absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.



### **What if I want to leave the study?**

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data that has been collected be destroyed unless it is in a de-identifiable state.

### **What about new information/changes in the study?**

If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

### **Voluntary Consent by Participant:**

By clicking “I Agree” in this survey you are agreeing that you read and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By clicking “I Agree”, you are agreeing that you are 18 years of age or older and are agreeing to participate in this study. You may print copies of this consent documents for your own records by clicking IRB Consent Form and printing the form from your personal computer.

Q23 I have read, understood, and printed a copy of, the above consent form and desire of my own free will to participate in this study.

- ☐ I agree and consent to participating in this study. (1)
- ☐ I disagree and do not want to participate in this study. (2)

Q22 Ethnicity: Do you identify yourself as American Indian, Native American, Alaskan Native, Indigenous, or First Peoples heritage?

- ☐ Yes (1)
- ☐ Yes and also another race/ethnicity (2)
- ☐ No (3)

Q25 Before taking the survey, please answer some demographic questions about yourself.

Q23 What is your tribal affiliation(s)? Please list tribal affiliations in the text boxes below (one per box).

- Tribal Affiliation (1)
- Tribal Affiliation (2)
- Tribal Affiliation (3)
- Tribal Affiliation (4)
- Tribal Affiliation (5)
- Tribal Affiliation (6)
- Tribal Affiliation (7)
- Tribal Affiliation (8)

Q24 What other race/ethnic affiliations do you identify with, if any?

- ☐ Race/Ethnicity (1) \_\_\_\_\_
- ☐ Race/Ethnicity (2) \_\_\_\_\_
- ☐ Race/Ethnicity (3) \_\_\_\_\_
- ☐ Race/Ethnicity (4) \_\_\_\_\_
- ☐ Race/Ethnicity (5) \_\_\_\_\_
- ☐ None (6) \_\_\_\_\_

Q149 What is your current age?

- ☐ 18 to 20 (1)
- ☐ 21 to 24 (2)
- ☐ 25 to 34 (3)
- ☐ 35 to 44 (4)
- ☐ 45 to 54 (5)
- ☐ 55 to 64 (6)
- ☐ 65 or over (7)

Q5 What is your current classification?

- ☐ Freshman (1)
- ☐ Sophomore (2)
- ☐ Junior (3)
- ☐ Senior (4)
- ☐ Graduate Student (5)

Q7 What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Do not wish to answer (3)
- ☐ Other: (4) \_\_\_\_\_

Q147 What do you expect your grade point average (GPA) to be at the end of this semester?

- ☐ 4.0 (1)
- ☐ 3.5 - 3.9 (2)
- ☐ 3.0 - 3.4 (3)
- ☐ 2.5 - 2.9 (4)
- ☐ 2.0 - 2.4 (5)
- ☐ Below 2.0 (6)

Q5 What is your current relationship status?

- ☐ Single (1)
- ☐ In a committed relationship (2)
- ☐ Living with significant other (3)
- ☐ Separated (4)
- ☐ Married (5)
- ☐ Divorced (6)
- ☐ Widow/Widower (7)
- ☐ Rather not say (8)

Q7 Which of the following best describes your community growing up?

- ☐ Urban (1)
- ☐ Suburban (2)
- ☐ Rural (3)
- ☐ Reservation (4)
- ☐ Non-Reservation Tribal Community (5)
- ☐ Other (i.e. spent summers on the reservation/tribal community): (6)  
\_\_\_\_\_

Q17 How many credits are you taking this semester?

Q1 Please pick your state, city, and institution. (The information will be recoded for institution type and not be identifiable in the final analyses). If your institution is not listed please choose Not Listed and list the institution in the next box.

(Table Truncated to 63 Columns)

Q24 If your institution was not listed on the previous question please fill in the box below.

Q20 Please answer the questions below about your experiences at your current institution.

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
My professors understand if I have to leave school to attend a marriage, funeral or cultural event back home. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I make cultural links to class content, my professor respects my comments. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My professors help me to understand the long-term benefits that completing college will have for me. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My professors show respect for my culture. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel connected to my professors. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a professor, who is American Indian/Alaska Native, on campus that I can talk to. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My peers show respect for my culture. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I participate in student groups on campus. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have Native friends on campus. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I feel like I am a part of the college campus community. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see my friends on campus as family. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have friends, from different cultures, on campus. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family encouraged my decision to attend college. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family is actively involved with my education. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family holds high expectations of me. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am at school, my family contacts me (email, phone, mail) to see how I am doing at school. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family expects me to graduate from college. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family supports my academic decisions. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My tribal/village community wants me to succeed. (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My tribal/village community holds high expectations of me. (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
My tribal/village community sees me as a role model now that I am in college. (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My tribal/village community's attitude towards me has positively changed since I went to college. (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My tribal/village community still sees me as one of them. (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At tribal/village gatherings, tribal members ask me about college. (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I go home, my elders ask me about school. (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My university or college hosts Native cultural activities on campus, such as Pow-Wows, American Indian/Alaska Native Month, etc. (26)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My university or college has a strong commitment to increasing American Indian/Alaska Native cultural awareness on campus. (27)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no support for American Indian/Alaska Native students at this institution. (28)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
American Indian/Alaska Native culture is well represented on campus. (29)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is an American Indian/Alaska Native student center on campus. (30)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like my college or university has given up on me. (31)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My university allows me to smudge (burn cedar) or perform other cultural activities while I'm on campus. (32)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My academic advisor helps me to understand the long-term benefits that completing college will have for me. (33)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel connected to my academic advisor (34)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a staff person, who is American Indian/Alaska Native that is supportive of my academic success. (35)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The staff (financial aid, student services) on my campus shows respect for my culture. (36)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel connected to the staff on campus. (37)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
There has been a staff member that has helped me to access various campus resources. (38)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While at college, I have felt pressured to hide certain aspects of my culture. (39)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While at college, I feel like I have had to change who I am in order to be successful. (40)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On campus, I have been treated in a negative way because I am Native (41)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Since starting college, I have learned about other people's culture. (42)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Since starting college, I have shared aspects of my culture with other people. (43)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While at college, I have been able to cross cultural boundaries. (44)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I first started college, I felt socially isolated on campus. (45)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I still feel socially isolated on campus. (46)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I can speak my Native language/dialect with other students on campus. (47)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it hard to make friends on campus. (48)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q36 Please answer the following questions about your experience at your current institution.

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Most of my courses have been intellectually stimulating. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my academic experience at my campus. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am more likely to attend a cultural event (e.g., a concert, lecture, or art show) now compared a few months ago. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the extent of my intellectual development. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
In addition to required reading assignments, I read many of the recommended books in my courses. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My interest in ideas and intellectual matters has increased since starting classes. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have an idea about what I want to major in. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This year my academic experience at my campus has positively influenced my intellectual growth and interest in ideas. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting good grades is important to me. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have performed academically as well as I anticipated. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My interpersonal relationships with other students have positively influenced my intellectual growth and interest in ideas. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have developed close personal relationships with other students. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
The student friendships I have developed have been personally satisfying. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My personal relationships with other students have positively influenced my personal growth, values, and attitudes. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It has been easy for me to meet and make friends with students. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my dating relationships. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many students I know would be willing to listen and help me if I had a personal problem. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most students at my campus have values and attitudes similar to mine. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the opportunities to participate in organized extra-curricular activities at my campus. (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am happy with my living/residence arrangement. (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I am satisfied with opportunities to meet and interact informally with faculty members. (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students. (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have developed a close, personal relationship with at least one faculty member. (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My non-classroom interactions with faculty members have positively influenced my intellectual growth and interest in ideas. (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My non-classroom interactions with faculty members have positively influenced my personal growth, values, and attitudes. (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My non-classroom interactions with faculty members have positively influenced my career goals and aspirations. (26)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
Many faculty members I have had contact with are genuinely outstanding or superior teachers. (27)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many faculty members I have had contact with are genuinely interested in students. (28)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many faculty members I had contact with are genuinely interested in teaching. (29)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many faculty members I have had contact with are interested in helping students grow in more than just academic areas. (30)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for me to graduate from college. (31)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important for me to graduate from my current institution. (32)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I made the right decision in choosing to attend my institution. (33)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 Thinking about your current campus community, please answer the following questions.

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I see myself as a part of the campus community. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I am a member of the campus community. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a sense of belonging to the campus community. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q26 Are you currently or have you been an active member of a Native American/Alaskan Native student organization during college?

- ☐ Yes (1)  
☐ No (2)

If No Is Selected, Then Skip to End of Block

Q22 What type of a Native American/Alaskan Native student organization are you/have you been a member of?

- ☐ Native American/Alaskan Native Student general organization (1)  
☐ American Indian Science and Engineering Society (2)  
☐ Native American Fraternity/Sorority (3)  
☐ UNITY (4)  
☐ Other (5) \_\_\_\_\_

Q13 What is your living situation?

- ☐ On-Campus (1)  
☐ Off-Campus (2)

If On-Campus Is Selected, Then Skip To How often have do you go home when cl...

Q25 Whom do you live with off-campus? (Check all that apply)

- ☐ No one, I live alone (1)
- ☐ Roommates and/or apartment-mates (2)
- ☐ My child(ren) (3)
- ☐ Parents or guardians (4)
- ☐ With relatives (not parents) (5)
- ☐ Spouse or partner (6)

Q19 In terms of "home-going", how often do you go home to your Native/Tribal community when classes are in session?

- ☐ Never (Don't go home when classes are in session) (1)
- ☐ Rarely (Once every couple of months) (2)
- ☐ Sometimes (Once a month) (3)
- ☐ Most of the Time (Multiple times throughout the month) (4)
- ☐ Always (Every weekend) (5)
- ☐ Daily (6)



## APPENDIX E

### PERMISSION TO USE INSTRUMENTS

5/8/14

UNCG Mail - Permission to use Sense of Belonging Sub-Scale



Symphony Oxendine &lt;sdmcdan2@uncg.edu&gt;

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#### Permission to use Sense of Belonging Sub-Scale

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**Ken Bollen** <bollen@unc.edu>

Mon, May 5, 2014 at 3:29 PM

To: Symphony Oxendine &lt;sdmcdan2@uncg.edu&gt;

Dear Symphony,

You have my permission to use the sense of belonging subscale. If you refer to the attached Bollen & Hoyle (1990) paper you will find the questions used in this subscale.

I would be interested in learning about your results when you have completed your research.

Sincerely,  
Ken Bollen

[Quoted text hidden]

**Bollen Hoyle SF 1990.pdf**  
3039K

## APPENDIX F

### EMAIL FOLLOWUP

Dear Colleagues;

A few weeks ago I asked your assistance in publicizing my dissertation survey via Facebook and forwarding the attached email to your student listserv. I am still seeking more participants. Again, I am not requesting access to your student list but merely your help in distributing the survey on my behalf to your students via Facebook and email. The survey will be open until Friday, November 14, 2014.

If you would send out this short reminder email to your students and post to Facebook I would greatly appreciate it.

Thank you for your time.

Have a great day,

Symphony D. Oxendine, Doctoral candidate, UNCG  
(Cherokee/Mississippi Choctaw)

Dr. Deb Taub, Faculty  
Teacher Education and Higher Education, UNCG

\*\*\*\*\*

[Please copy the following to Facebook or forwarding via email](#)

Hey Everyone!

A few weeks ago, I sent a request for participants in dissertation research on behalf of Symphony Oxendine (Cherokee/Mississippi Choctaw). Her study will explore what factors contribute to Native American college students' sense of belonging and cultural integrity within the campus community. **She is still seeking participants until Friday, November 14, 2014.**

Her study will explore what factors contribute to Native American college students' sense of belonging and cultural integrity within the campus community. If you are 18 or older and identify as Native American, which includes anyone who self-identifies as part of the indigenous population of the Americas including indigenous people of Alaska, Hawaii and American Samoa, and attend a 4-year public or private institution, you are eligible to participate in this research study. By completing this survey, you may be helping promote an awareness regarding Native American students' experiences and success in higher education.

Link: [https://uncg.qualtrics.com/SE/?SID=SV\\_3VseUzAJTZxefQN](https://uncg.qualtrics.com/SE/?SID=SV_3VseUzAJTZxefQN)

Your participation will be approximately 15 minutes and is anonymous, completely voluntary, and you will not be contacted again in the future. There is no compensation for participating in this research; you will not be paid for being in this study. However, if you do decide to participate, you will have the opportunity to enter a drawing for one of the six \$25.00 American Express Gift Cards after completing the survey. Completing this survey involves minimal risk to you. Recipients of the gift cards will be contacted in November 2014 and the gift cards will be mailed out two days after recipients provide their contact information.

Thank you so much!!!

## APPENDIX G

### EMAIL TO SITE COORDINATORS

Friday, February 13, 15

«Institution\_Name»

Dear «Organization\_Contact»,

I am currently a Higher Education doctoral student at The University of North Carolina at Greensboro, under the mentorship of Dr. Deborah J. Taub, conducting dissertation research to examine the factors that contribute to Native American college students' sense of belonging within the campus community and their intention to persist, as well as illuminating the impact of cultural identity on students' collegiate success. For the purposes of my study, Native American includes anyone who self-identifies as part of the indigenous population of the Americas including indigenous people of Alaska, Hawaii and American Samoa. I am seeking to sample Native American students from «Institution\_Name» and would like to include your institution and its employees in my research.

I would like to request permission from the authority within your institution who has the ability to grant permission for an initial/invitational email and one follow-up reminder email to be distributed to your Native American students, requesting approximately 15 minutes of their time to complete an anonymous, online survey exploring their experiences in higher education and finding out what factors contribute to Native American college students' sense of belonging and cultural integrity within the campus community. I am not requesting access to your student list but merely the ability to forward the email to the appropriate authority who would then distribute the email on my behalf to your staff. There is a possibility I might request for one reminder email to also be sent out, depending on the result from the initial invitation.

For purposes of my institution's Institutional Review Board (IRB), I must have written authorization from each institution granting me permission to seek participation from its membership. I have provided a generic permission form below that can be easily filled in by the appropriate authority and emailed back to me from his or her email account. A copy of the email will be submitted, along with my forms, to the IRB for formal approval to carry out my study.

I appreciate your consideration and attention to this request. It is my hope to add to the Native American student and higher education knowledge base and work to add to the scarce literature base that exists regarding Native American students' experiences and success in higher education.

Please do not hesitate to contact me if you have any questions or concerns.

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Please copy the following, filling in the needed information, and return to Symphony Oxendine via email at [sdmcdan2@uncg.edu](mailto:sdmcdan2@uncg.edu).

I confirm that I have the authority to grant permission for an email to be forwarded to enrolled Native American students, on behalf of Symphony Oxendine, in order to invite Native American students to participate in an anonymous online survey for the purpose of gathering information for a doctoral dissertation research study. Additionally, I agree to assist in sending out this email to our students.

Name of person granting authority:

Position of person granting authority:

Organization above person represents:

Approximate number of people who will receive the email request:

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